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PRACTICAL OBSERVATIONS

ON THE

CHILD-BED FEVER,

AND THE

Acute Diseases

IN GENERAL, MOST FATAL TO

W O M E N

During the State of PREGNANCY.

By JOHN LEAKE, M. D.

Member of the Royal College of Physicians, London;
and Physician to the Westminster Lying-In Hospital.

FIFTH EDITION, with ADDITIONS.

VOL. II.

L O N D O N:

Printed for R. BALDWIN, in *Pater-Noster Row*; and
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Member of the Royal Society, London;
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LONDON

Printed by J. M. D.

1824

By the following Letter, with which the Author was honored,
A.D. 1775, it appears that the subsequent Work is translated into French; it has also been translated into the German and other languages.

Monsieur Monsieur John Leake, docteur en medicine,
membre du collège royal des medecins de Londres, &c.

Maximâ cum voluptate et non sine fructu, Vir illustrissime, et ornatissime, tuum legi et relegi librum, cui titulus est: *Practical Observations on the Child-Bed Fever, Printed London 1772.* In illo enim reperi animadversiones curiosas et plane novas de affectibus omenti, disquisitiones nitidas, et sagaces, de curatione febris puerperium insequentis, dubitationes quas dictarunt prudentia et moderatio, contra systema nostri Celeberrimi *Leuret*, cogitationes accuratas de hæmorrhagiis ante, et post partum. Quid Magis? in toto judicium et scientia veri boni que medici refulget. his itaque perpensis, seu ægrotorum salutem, seu artis medicæ incrementum prospiciam, tuum librum cunctis gratissimum duxi; qua propter ut melius innotescat, hunc in idioma gallicum converto, jam ferme absoluta est interpretatio; et paucos intra menses, si tibi libet, prelo publico poterit in Franciâ committi.

Mihi familiaris et colendus amicus habet nunc sub prelo tractatum idiomate Gallico scriptum de hæmorrhagiis uterinis. Plurimis abhinc mensibus auctori communicaveram versionem tuæ sectionis V.æ. *Of the nature and cause of uterine hæmorrhages, and their treatment, &c.* in hoc novo tractatu mei amici, multa sunt de te excerpta cum laude tui ingenii et tui operis.

Auctor novi tractatus, post expositionem variarum methodorum contra hæmorrhagias uteri, nil efficacius invenit quam obturatio vaginæ cum Linteolis vel siccis, vel imbutis aceto, sed profunde immixtis. Hæc methodus olim vetustissimis nota, in oblivione quodam modo jacebat; sed nunc resurgit longâ et felici experientiâ stabilita; et enim introductio linteorum in vaginâ, dum sistit sanguinis fluxum, juvat quoque formationem coaguli;
interim

interim uterus novas acquirit vires ; sese conglomerat et constringit, contractionibusque propellet coagulatum sanguinem et linteola immissa ; sed ut obturamentum vaginæ sit semper saustum, plurimæ sunt adhibendæ cautiones : scilicet, mollis compressio uteri cum manû, applicatio supra pubem linteorum aquâ frigidâ, aut forsan melius aceto madidorum, usus aeris frigidi, et, ut uno dicam verbo, quidquid potest juvare uteri contractiones et vasorum sanguinem fundentium clausuram

Celeberrimus *Hoffman*, *Cornelius Trioen*, multique alii jam indicarant obturamentum vaginæ contra hæmorrhagias uteri ; hæc methodus tibi, Vir clarissime non erat ignota ; attramen in praxi vix erat explorata. In curriculo mensis proximi, ut opinor, novus tractatus mei amici evulgabitur ; et in illo videre poteris ferme omnia quæ scripsisti de opio, medicamentis astringentibus, venæ sectione, &c.

Vale, Vir clarissime ; et quanquam sim extraneus, et nullo modo tibi notus, non dedigneris, quæso. meam sinceram admirationem.

Datum Divione die 21. 7bris. 1775.

FRANCISCUS CHAUSSIER.

Chirurgiæ magister in urbe Divionensi apud Burgundos, acad. reg. chirurgiæ Parisiensis correspondens, &c.

P. S. Si velis mihi responsum dare. subjungo inscriptionem epistolæ in idiomate gallico.

A Monsieur Monsieur Chauffier. Maitre en Chirurgie, &c. a Dyon.

Dr. Leake's PUBLIC LECTURES

ON

MIDWIFERY, and the *Diseases peculiar to Women and Children,*

Will commence, from Time to Time, as usual, at his THEATRE in Craven-Street, LONDON, where Particulars may be known.

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P. S. The Reader is requested to correct such typogra-
phical Errors as have escaped the Author's Attention, in this
and the former Volume.

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not render them regarded of the event
but rather induce their solicitude for the
patient's safety and induce them to try

and will have to be frequently tried.
While I was preparing the following
notes for press, Dr. Hume published a
treatise on the same subject, the object of
which I had

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tried being laid down as was which I had
repeatedly advanced, and three years be-
fore in the course of a lecture on Child-

IF those Diseases which have been found most dangerous and mortal in their effects, ought principally to be considered by physicians ; none will more deservedly claim their attention than the *Child-bed Fever* ; as there is not, perhaps, any malady to which the human body is subject, where powerful remedies of every kind have been tried with more diligence and less success. But, surely, this circumstance, discouraging as it is, should

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not render them regardless of the event, but rather increase their solicitude for the patient's safety, and induce them to try new methods of cure, since those hitherto adopted have so frequently failed.

Whilst I was preparing the following sheets for press, Dr. *Hulme* published a treatise on the same subject, the 29th of February 1772, where some points of doctrine being laid down as *new*, which I had repeatedly advanced, near three years before in my *public course of Lectures on Midwifery, and the Diseases incident to Women*; I cannot, without injustice to myself on this occasion, omit the mention of the following circumstances, viz. That towards the end of the year 1769, and about the beginning of 1770, I attended several patients who laboured under the Child-bed Fever, both in private practice, and at the *Westminster Lying-in Hospital*, in consequence of being Physician to that charity.

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As I gave *Lectures* on the *theory* and *practice* of *Midwifery*; I thought it my duty to communicate whatever I knew on that subject, to those gentlemen who did me the honor to attend as *pupils*; and therefore, in consequence of such observations as the daily occurrence of different cases, and frequent inspection of morbid bodies afforded me at the *Hospital* and elsewhere, I took the liberty to advance the following particulars. Namely, that the *omentum* was the part principally affected, having generally found it either almost totally consumed and melted down into a thick curd-like pus, or partially suppurated and inflamed; and that this inflammation had often overspread the surface of the intestines. A large quantity of purulent, whey-colored fluid was also found in the cavity of the abdomen and pelvis, mixed with small clots of blood and curd-like matter.

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I also

I also laid it down, as my opinion, that this fever was not occasioned by a translocation, or absorption of *corrupted milk* from the breasts, or any obstruction of the *putrid lochia*; also, that it was not owing to an *inflammation* of the *uterus*, or to a morbid affection of that organ, as generally believed and asserted by different authors; and therefore, that it ought to be referred to other causes, as a *Disease of a peculiar nature*, and distinct from all others. However, the conformity between that gentleman's writings and mine may be solely confined to a description of the characteristic symptoms of the disease, and its morbid appearances after death; in both which, as nature is generally uniform and consistent with herself, any two authors transcribing from the same original must necessarily agree. But in what relates to the causes and cure of the disease; so far from similarity of opinion, no doctrines can be found more opposite or dissimilar.

At

At the same time I took occasion to mention an alteration of this article, in my *Syllabus of Lectures*, having, in a former impression (with *Hoffman*) called it the *Uterine Fever*, but being afterwards convinced there was nothing strictly uterine in that complaint ; in the next impression, A. D. 1771, I gave it the name of Acute Fever peculiar to Women after delivery.

I also from experience recommended *early* and *copious bleeding*, with the antiphlogistic method, in preference to every thing else I had seen tried in the cure ; and as a confirmation of these facts, I appeal to the gentlemen whose names are subjoined, at the conclusion, who attended and took notes of the several public courses of my Lectures, given in the three succeeding years 1770, 1771, and 1772 ; in which the several points of doctrine already mentioned, were circumstantially and repeatedly laid down.

Being not a little solicitous for the recovery of the patients intrusted to my care,

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I spared no pains in giving my attendance by every possible opportunity, and also had the satisfaction of meeting Dr. *James Ford*, a gentleman deservedly eminent for his candor and skill, and one of the physicians of this hospital; But although we frequently consulted what was best to be done, and tried various medicines and methods for their relief, our best endeavors to that end often proved ineffectual,

It grieved me to find that so many women died of this destructive Fever, but since there was reason to believe it was at first imperfectly understood, I still had hopes that by time and observation, it might admit of more certainty in the cure, and become less formidable. I therefore, made it a rule to commit to paper the several symptoms and circumstances in the order they occurred, and also, the daily and hourly changes which happened at different periods of the disease; as far as opportunity would allow me, either from
my

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my own attendance on the sick, or information of the *Matron*, or *Nurses* in my absence. I noted down their degree of violence and time of duration, as exactly as possible, and also, whether the patient became better or worse, in consequence of such particular symptoms as appeared from time to time.

These, the Reader may depend upon as so many *Facts*, or *clinical Minutes*, which I collected as materials for a History of the disease, and as for the deductions or practical inferences arising from them, they are submitted to the judgment and candor of the medical reader, as matter of opinion, to be confirmed or corrected, as they may be found to correspond with observation and future experience.

The great variety of opinions prevailing among speculative men, in what relates to the origin and cure of diseases, is a convincing proof of the fallibility of the human mind. The subject of Physic is

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attended with so many difficulties, that we frequently deal in probable conjectures rather than certain truths; and this will always be the case in every science where so little can be decided by demonstration and actual experiment, and where the rest depends upon the caprice of our reasoning faculties, which are so insensibly perverted, and as it were led captive by the early prejudices of education, and reigning custom of countries; that things thus seen through different mediums, must necessarily strike our senses very differently, though in their own nature, they are uniformly the same.

Respecting the most powerful remedies, as *opium*, *mercury* and *bark*, such is the opposition of sentiments concerning their use, that one would almost be tempted to conclude, there was no true standard, no leading and unerring principles, by which to determine, either the effect of medicines, or the nature and event of diseases,

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The division of diseases into *putrid* and *inflammatory*, however simple and necessary it may appear, has been productive of much dissention and cavil among practitioners; but had they been less violent in contending about mere words, and more accurate in pointing out the true marks which constitute the difference in those two classes of disease, they would have deserved better of the profession, and the public.

With some, almost every disorder is supposed to be of the putrid kind; and therefore, Cordials, the Bark, and other antiseptics are directed as the sovereign remedies; and he that should venture to direct bleeding, would run the risque of being called an executioner, rather than a physician. On the other hand, many in our own country, but especially in *France*, and the warmer climates, look upon most Diseases as inflammatory, and suppose, that nothing is so requisite and effectual in
 their

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their cure, as Bleeding, Evacuations, and plentiful Dilution; and the methods recommended by the former, in the very same sort of cases, are deemed no better than rank poisons. Where Men are thus enslaved by custom, or actuated by blind zeal, they often err in violent extremes, and assert their opinions with as much confidence as if there was not even a possibility of being mistaken; but, what is still worse, they sometimes reflect on one another in terms the most illiberal and unjustifiable, to the discredit of the Profession, and the injury of each other's reputation.

Which way are we to turn, where rocks lie on one side, and quick-sands on the other?

Nothing has been so great an obstacle to the improvement of science, as the partiality, and obsequious regard, which men have been apt pay great authorities; for whilst they disregard the testimony of their own senses, and weakly or indolently assent

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assent to things as right, on the credit of others, they are seldom at much trouble to examine whether they are really so or not; and errors early adopted, are either reluctantly corrected, or at last, take such total possession of the mind, that they become habitual, and are retained ever after.

Much respect is certainly due to all such Authors as have set down with candor and truth, whatever they knew in the cure of diseases; but very often, instead of plain facts, the Reader is presented with such a medley of reality and fiction, partly from books; the Author's imagination, and the disease itself; that when he has perused the whole, he is as much at a loss as ever how to proceed in practice.

Of late, indeed, medical writers have happily withdrawn themselves from the Fairy-land of hypothesis and conjecture; and, instead of deviating from the solid path of nature, as many of them had formerly

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merly done, are now principally guided by observation and practical experience.

Those who mean to get useful knowledge, will therefore do well to take their information from the living body, by every opportunity of attending the sick ; this will be going to the fountain-head, and reading, as it were, from the ample volume of Nature itself ; where the true state of disease will more clearly unfold itself to the diligent observer ; the effects of medicine will be better known, and the methods of cure, from thence, become more certain and consistent.

In the history of a disease, the several symptoms ought to be set down with simplicity and clearness, exactly as they present themselves, without any innovation, conjecture, or false coloring ; which, having nothing to do with reality, would corrupt and adulterate the whole, and render it a mere recital of opinions and surmises, rather than a genuine description of the disease

case

case itself. A distinction should also be made between such symptoms as uniformly appear in the beginning, and are, as it were the immediate offspring of the disease ; and those which are only occasioned by difference of constitution, age, climate, or errors in diet : The first ought to be considered as the true and inseparable *pathognomonic signs*, which denote its nature and tendency, and from which the indication of cure is chiefly to be taken ; the last, only as accidental changes not so much to be regarded.

The state of the air, together with the patient's age, and habit of body, should be mentioned ; and the effect of medicines administered at different times, whether good or bad, should also be faithfully and candidly set down, and distinguished from the symptoms of disease, or the simple efforts of nature ; which, happily for the patient, are sometimes such as surmount every obstacle to a cure.

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An accurate examination of the affected parts after death, by leading to the seat of disease, also tends to perfect its history, and assist in throwing light on the cure; and this will always be most necessary in dangerous and uncommon cases, where powerful medicines have been tried in vain. By attending to those morbid appearances, which have an intimate relation to such symptoms as were imperfectly understood, we proceed from effects to their causes, which could never be done with so much certainty by regarding the signs of the disease only. For instance, it did not appear obvious from the symptoms of *Child-bed Fever*, that the *omentum*, rather than the *uterus* or *intestines*, was the part principally affected.

But although opening of bodies may afford much information, false inferences have often been made from them; for, all such *morbid appearances*, as there is reason to believe did not exist till long after the invasion

invasion of the disease, ought to be looked upon as so many consequences, and not the causes of it.

The seat of diseases is often apparent, tho' their causes are frequently too remote for the discovery of the most acute and accurate observer. But notwithstanding many changes are produced in the living body, for which no adequate or satisfactory reason can be assigned, there are some certain appearances which almost uniformly succeed one another. For instance, pain, from whatever cause it may arise, if violent, will produce spasm, fever, or inflammation; and these are often followed by some critical evacuation, which is salutary; or where that is wanting, by abscess or gangrene, which falling on the vital parts, will render the disease incurable. This has often been the case in the *Child-bed Fever*, and therefore, such an unfavourable termination ought, if possible, to be prevented by evacuations,

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cuations, and the administration of medicines tending to carry off the morbid cause by some of the natural secretions.

Sydenham has observed, that the fever which follows a suppression of *lochia*, sometimes changed its type to that which prevailed in the epidemical season.

That women after delivery, are more disposed to fever at one time than another, according to the constitution of the air, cannot be doubted; considering its great influence on valetudinary habits, and diseases in general; but particularly the *small-pox*, *epidemical dysentery*, and *ulcerated sore throat*, which not only become more frequent, but also more fatal, as the air changes from a healthy to a malignant state.

The great plague in *London*, A. D. 1636, which lasted twelve years, was more or less fatal at different periods; viz. in eight years, one with another, two thousand

and people died yearly, and never less than eight hundred in one year ; which shews that the contagion and its mortal effects, depended as much upon the state of air, as on the disease itself. This circumstance is still more clearly proved by the great disproportion of deaths in different weeks ; the number in one week increasing from one hundred and eighteen, to nine hundred and twenty-seven in the next ; and in another, decreasing from nine hundred and ninety-three, to two hundred and fifty-eight ; and from that number, again increasing, in the very next week, to eight hundred and fifty-two.*

How diseases are produced or influenced by the obvious qualities of air, is difficult to determine, notwithstanding all that has been said on the effects of heat and cold, moisture and dryness, or the winds blowing from particular quarters at certain seasons,

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sons,

* Vide *Grant* on the Bills of Mortality.

sons, with different degrees of violence : seeing, that very sudden changes of weather, from one extreme to another, frequently happen, without producing any diseases of the malignant or epidemic kind. In like manner, a defect in the natural secretions, violent passions of mind, or errors in diet, at one time occasion fever and not at another ; which evidently shew that the first cause of diseases, whatever it is, acts more or less powerfully, as the natural temperament of body concurs to increase or diminish its effects.

In the year 1746, during the winter season, a disease of the epidemical kind was observed to prevail with great violence among lying-in women.* It began with a *diarrhœa*, followed by pains in the abdomen ; the *lochia* did not appear at their due time, and the belly became hard, tense, and painful ; the head was also affected with pain, and

* Acad. des Sciences l'an. 1746, in 4to. Mem. p. 160.

and sometimes a cough attended : About the third or fourth day after delivery, the breasts which usually about that time were filled with milk, became flaccid, and about the fifth or seventh day the patient frequently died.

Poor women delivered in Hospitals, were observed most subject to this disease ; and in the month of *February* it became so extremely dangerous and epidemical, that scarcely one in twenty escaped it.

When the bodies of the deceased were opened, we are told, that *coagulum lactis* was found adhering to the exterior surface of the intestines, and *serum lacteum* contained in the abdomen. In some, the same kind of fluid was collected in the cavity of the breast. The *stomach, intestines* and *uterus*, had undergone inflammation ; and in many, the *ovaria* appeared diseased and suppurated.

The disease here mentioned seems to have been occasioned by a morbid affec-

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tion of the *uterus* ; and therefore, may be considered as very different from that hereafter to be described.

If the deaths of child-bed women depended upon the same causes as those which proved mortal in the small-pox, dysentery, and reigning fevers of the season, as there was great reason to suppose ; this circumstance could never have been so truly known as by examining the *Bills of Mortality*, and remarking how far the deaths under the article *Child-bed* kept pace with those arising from the above diseases. But these bills are regulated with so little care and exactness, either in respect to the diseases themselves, or numbers said to die of them ; that it would, from thence, be extremely difficult to determine this matter in a satisfactory manner. The yearly bills would by no means be sufficient to do it ; because although a greater than usual number might die in the epidemic season ; in the subsequent months,

months, which make up the year, and which generally prove more healthy, the proportion of deaths might chance to be less; which, upon the whole, taking one year with another, would occasion but very little difference. I therefore regularly procured the weekly Bills of mortality, during the whole time of the *Child-bed Fever*, in order to ascertain this matter more exactly.

In the months of *January*, *February* and beginning of *March*, the disease prevailed with uncommon violence, and was evidently *epidemical* in different parts of the town; although on comparing the number of deaths occasioned by it, with those arising from the *epidemics* of the season; I did not find that correspondence which at first I expected. However the great difference in the number of women who died in the year 1770, compared with that of the preceding year 1769, or the subsequent year 1771, sufficiently and clearly proves

that this fever was epidemical in the first : The number of deaths in the yearly bills of mortality for the cities of *London* and *Westminster*, under this article, were as follows : From December the 13th, 1768, to December the 12th, 1769, died in Child-bed, *one hundred and eighty-five*. From December the 12th, 1769, to December the 11th, 1770, died, *two hundred and seventy* ; and from December the 11th, 1770, to December the 10th, 1771, died, *one hundred and seventy-two*. So that in the year 1770, compared with the other two, the number of deaths was very near a *third part* more ; and as this increase of number did not happen uniformly, throughout the year, but was chiefly brought about in that half of it, which commenced with December, and ended with May ; it is still more evident, that it could arise from no other cause than a malignant constitution of the air.

But

But altho' it was proper and necessary to mention the bills of mortality as a standard to which the reader might be referred; if I might be allowed to form a conjecture of the mortality of this disease, by what occurred to me, as well as several others of the profession, with whom I frequently conversed on the subject; I should have no doubt, but, at least, half as many more women died of it, as those mentioned in the bills of mortality; which instead of being set down under the article *Child-bed Fever*, were indiscriminately placed to the account of *flux*, *pleurisy*, or some other disorder.

It is a public misfortune that those bills still continue to be kept in such a manner as to defeat their original intention, and to render all calculation in this matter vague and indeterminate.

Some years ago, an application was made to parliament by the company of parish clerks, setting forth the necessity of

keeping an exact register of *births, burials, and marriages*, in all the parishes throughout England; instead of the present one including *christenings and burials* only, as confined to the parishes within the bills of mortality for the cities of *London and Westminster*. Had this application been duly attended to, and supported by parliament; many great and obvious advantages would have been the consequences of it; for the healthy or unhealthy state of the air at particular times and places, might from thence have been more exactly ascertained; as well as the increase of population, in which the strength of every nation consists.

HISTORY

HISTORY

OF THE

CHILD-BED FEVER.

SECTION I.

*History of Child-bed Fever deduced from the
Symptoms of that Disease, taken from the
living Body, and an Examination of its
morbid Appearances after Death.*

AS it is evident that women, after delivery, are more subject to fevers during a distemperature of the air; I have, previous to the history of this disease, subjoined a short account of the weather, with a view to shew how far the symptoms might be increased or abated by its influence,

influence, during those months in which it was found most *epidemical*.

Air is so essential to the existence of all animals, that the want of it only for a few minutes is destructive to life. It not only acts constantly on the surface of their bodies by its pressure, but is also continually taken into the lungs by respiration; and therefore, it is no wonder the health should be so variously affected by it, as its qualities are changed and become more or less salutary. The diseases which are *endemic* in particular countries, depend principally upon this circumstance; but human bodies being also affected by intemperance, and the passions of the mind; those acute distempers which sometimes rage, for a time, with uncommon violence, among brute animals living in the open fields, and in a state of nature, are more evident proofs of its powerful influence. The first shews that the atmosphere of particular places, is at all times more or less unwholesome;

unwholsome ; the last, that the atmosphere in general, may become so for a time, from variety of natural causes which notwithstanding are so obscure, that they would scarcely be known to exist, was it not for their effects*.

A short account of the weather from October 1769, to the end of May, 1770.

The month of October commenced with fine clear weather, the wind in moderate breezes being chiefly at N. N. E. From the 5th to the 8th, it was bleak and cold, with some rain. From the 9th to the 13th, the days were clear and frosty, with foggy nights and mornings ; the wind being first westerly, and afterwards shifting from W. to E. and then to E. N. E. From thence, to the 25th, moist and mild weather, the wind being variable ; a day or two of frost then

* Here, it is only a tribute due to merit, to apprise the reader of many curious and interesting discoveries on the properties of different kinds of *air*, lately published by the ingenious Dr. Priestley.

then succeeded, and the month ended with missing rain and mild weather.

November began with mild weather, and some smart showers; till the 8th it was warm, moist and gloomy, the wind being chiefly at S. S. W; the remainder of the month was extremely variable, the nights being frosty and the days sometimes clear and bright, and at other times overcast with clouds, attended with missing rain; the wind shifting to all points of the compass, but chiefly to W. S. W.

December commenced with frosty clear days and foggy nights, the wind being variable; to the 8th, the weather in general was clear, but sometimes foggy with missing rain, the wind being then chiefly at S. and E. S. E. with continual transitions from one extreme to another, viz. from a clear frosty air to cloudy damp weather with missing rain; and towards the end, frost with sleet and snow; the wind to the

22d being mostly at W. and S. S. W. and afterwards it blowed from the N. to the N. N. W.

January began with moist weather, and a thick atmosphere till the 4th, on which day there was a fall of snow, the wind being chiefly at W. N. W. and N. N. W. to the 11th, smart frosty weather, with large quantities of snow, the wind at N. N. E. and N. N. W. From thence to the 17th, it was fair and rainy, bright and foggy by turns; on the 18th, a cold frost began, with a large fall of snow, the wind at N. E; from thence to the 28th, mild, but variable, the wind being chiefly at S. or W. S. W. with moist gloomy weather, which concluded the month.

February began with fine weather, which continued to the 6th, the wind chiefly at S. W. from thence to the 8th, showers of rain and snow, with a frost, and the wind at N. To the 17th, changeable moist weather, the winds chiefly at S. or S. W.

On

On the 18th, alternate showers of hail, snow and rain; from thence to the 22d, variable; to the 25th, cold and bleak, with frost and some snow; the wind being stationary at N. N. E.; to the end, the weather was cold, moist and cloudy, and the wind chiefly at S. W. and S.

March commenced with moist hazy weather, and a mild temperature of the air, with gleams of sun-shine, which continued to the 7th; the wind continually shifting. To the 14th, it was cold and gloomy, with considerable quantities of rain, the wind chiefly at N. E.; from thence to the 29th, sharp frost, with severe cold winds, and alternately, large falls of snow, and showers of fleet and hail; the wind chiefly at E. N. E. This month ended with thaw and some rain, the wind then blowing from the south.

April began with rainy weather, and heavy showers of hail and fleet, the wind chiefly at W. and W. S. W.; from the 8th

to

to the 14th, cold, bleak, wet weather, with more snow and hail, the wind being stationary at N. N. E; from thence to the 20th, fine weather, but showery; the wind at W. and W. S. W. This month concluded with severe wet weather.

May commenced with excessive cold rainy weather, and frequent showers of snow and hail, the wind at N. N. E. and N. N. W. From the 4th to the 8th, it changed to the S. and W. S. W. with cold heavy rains; from thence to the 16th, the weather in general was fine, with some thunder showers; to the 25th, cold, unsettled weather, and towards the end of the month, it was moist and hazy, the wind being at E. N. E.

Hippocrates observes, that a mild rainy winter succeeded by northerly winds in the spring, was dangerous to pregnant women*. Agreeable to this observation in the winter months, when the Child-bed
Fever

* De Aëre Locis et Aquis.

Fever began, the weather was observed to be remarkably mild and moist, with a warmer temperature of air than was natural to the season; and this was succeeded by cold, bleak winds in the spring, which were very unfriendly both to animals and vegetables.

About the 14th of March, 1770, a sharp frost commenced, with large falls of snow, and alternate showers of sleet and hail, the wind being at North-east: This weather, which was uncommonly severe, lasted till near the end of the month, at which time the malignant force of the Child-bed Fever seemed to abate; for altho' several women were affected with it at the *Hospital*, soon after that time; only two of them died, namely, *Ann Simms*, who was seized with it before the frost began, and *Ann Deuse*, who died the 29th of the same month, just at the commencement of thaw. The attack of the cold fit was less violent, and the subsequent febrile symptoms much
more

more mild and favorable. The pulse was neither so quick or weak, nor was the sickness and vomiting so great; and instead of being followed as usual, with pains in the bowels and griping bilious stools, the diarrhæa was moderate; the pulse rose in strength, and a warm sweat frequently broke out all over the body. Besides, the secretion of milk was seldom interrupted, but continued plentiful; which, in general, may be looked upon as a favorable sign; at least, it shews that the violence of the disease, in such cases, is not so great as to take it away.

The History of a disease will always be most perfect, where so little has been done by art, that the operations of nature remain free and undisturbed. I shall therefore describe this Acute Fever peculiar to women, after delivery, as it appeared when only assisted by medicines of the simplest kind.

When the quickness of pulse brought on by the efforts of labor does not afterwards

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soon

soon go off; it denotes something amiss in the habit, tending to kindle up a fever, which will always be found more dangerous, the sooner it invades the patient.

The *Child-bed Fever* generally commenced about the evening of the second, or beginning of the third day after delivery, with a rigor or shivering fit. Sometimes it came on sooner, and though rarely, has been known to appear as late as the fifth or sixth day.

In many women, the attack was sudden, without any apparent cause or preceding indisposition; and soon followed by headache, restlessness, great sickness at stomach, and bilious vomitings.

Some had a bitter taste in the mouth; a nausea and universal langour; the countenance at first was pale, and often much altered, with a lifeless, dim state of the eyes, and an indolent pain over their orbits. These symptoms would sometimes foretel the approach of the disease, even before
any

any coldness or shivering was perceived; but upon the whole, they may be considered as *anomalous*, for in general, the shivering preceded; and allowing for the difference of age and habit of body, there are perhaps few diseases where the signs more regularly succeeded each other, or where the morbid appearances after death, were found more exactly the same.

Now and then, this Fever seemed to be brought on by *taking cold*, or *errors in diet*, but much oftener by *anxiety of mind*; and therefore, women of delicate constitutions, very susceptible and continually agitated by hopes and fears, are, of all others, the most subject to it, and recover with the greatest difficulty; consequently, unmarried women, for obvious reasons, were most apt to be seized with it.

The degree of the cold fit was very different in different women; in some, it would last near an hour, and was so intensely violent as to shake the body like

an ague; others were only affected with a kind of thrilling sensation, or temporary chillness on the skin, which soon went off and returned by irregular periods.

When the fit lasted long and was violent, I observed great anxiety and oppression at the breast, attended with a laborious respiration, but without pain; the patient was often affected with deep sighing, and complained of great weight at the heart.

In those who were young and of a strong habit, altho' the *rigor* was violent, its duration was sometimes short; and when the pulse rose in strength and fulness, and became less frequent, it was succeeded by a better state of countenance, and the oppression was sooner removed from the *præcordia*; altho' no eruption appeared on the breast or body, as I at first expected, till experience taught me otherwise.

In such cases, which unfortunately occurred but seldom, an universal glow was diffused over the whole surface of body;
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the skin began to be more florid, and a free perspiration came on with manifest relief, altho' it was not always lasting.

On the contrary; those who were slightly attacked in the beginning, often had a return of the febrile accession, and were alternately hot and cold throughout the day, especially if the pulse did not rise, but continued quick and weak. In such, the fever did not seem to run high; the tongue being very little altered from its natural state, nay, sometimes it was even moist and soft, and the thirst very inconsiderable; yet, in the end, they did not escape much better than others where it was more violent.

Those of lax fibres and of an irritable, hysterical habit, were ofteneft thus affected; or where the constitution was much weakened by anxiety of mind, or a preceding bad state of health.

Sometimes the thirst was great, tho' the tongue had generally a better appearance

in the beginning than is common in other fevers, for it was seldom black or very foul; but as the disease advanced, became white and dry, with an increase of thirst, and at last was harsh and of a brownish color towards the root, where it was coated with inspissated, yellowish mucus.

That perspiration which proved salutary, overspread the whole body, attended with moisture of the tongue and fauces, and also with abatement of thirst, sickness, and head-ache; but on the contrary, where the sweats were confined to the breast, neck, and face, tho' they often continued to the last, I never could observe the least mitigation of the symptoms; such partial sweats being the very effect of weakness and febrile anxiety, and not owing to any critical efforts of nature.

So great and sudden was the loss of strength, that very few of the patients were able to turn in bed without assistance, even so early as the first or second day after the attack;

CHILD-BED FEVER. 47

attack; and most of them continued helpless throughout the whole progress of the disease.

In the cold fit the pulse was quick and small, and the pulsations so feeble and indistinct, that sometimes I was hardly able to number them exactly. When the hot fit came on, tho' it was then more full and distinct, it still remained quick, but was seldom hard or strong, except in few instances, where the patient was young and plethoric. In general, it would beat from *ninety to one hundred and thirty-seven* strokes in a minute; varying by turns in strength and frequency from the lowest to the highest of these numbers, and *vice versa*, in proportion to the strength or weakness of the habit, and violence of the attack. An excess or defect of the natural secretions, the state of mind, with many other accidental causes, will be found to produce great alteration in the pulse, both in respect to its strength and quickness.

The sympathy between the head and stomach is so great, that it is sometimes difficult to distinguish which of them is first affected; but in this disease, the head-ache generally preceded the sickness at stomach; where the last was great, the patient vomited spontaneously; otherwise, the nausea continued till a purging began, and then usually ceased. The last was always most violent when nothing had previously been rejected by vomit.

It is here necessary, to distinguish this febrile head-ache, from that which very commonly happens at the coming of milk, when the body is costive; the first may be relieved by a gentle emetic, the last may be effectually taken away by cathartic clysters and laxatives.

The first attack of this fever is sometimes so violent, that in many respects, it resembles the *cholera morbus*; for the pain, sickness, and burning heat in the stomach,

stomach and bowels, are almost the same; and the bile, in great profusion, is discharged upwards and downwards; tho' in the first, the pulse is more quick and weak.

The fluid rejected by the stomach was yellow and ropy, and seemed to be a mixture of bile with large quantities of gastric mucus; sometimes it was green and porraceous, but when the vomiting continued till the advanced state of the disease, or returned towards the end; it was then watery and of a *blackish color*.

The sickness at stomach was always much relieved by vomiting; but when that abated, a violent purging came on, with severe gripings and pain in the bowels.

The vomiting attending this fever, should always be distinguished from that which often accompanies a quick labor from the violent efforts of the uterus; the last is not bilious, and soon goes off after delivery,

delivery, without any bad consequence of subsequent fever.

At the beginning of the diarrhæa, the stools were yellow, frothy, and mixed with mucus; sometimes they were greenish, but towards the end of the disease, at which time they often became involuntary, they were blackish, foetid, and more dilute, resembling the color of *moss water*.

I never saw this fever appear with any degree of violence, but it was always attended with an obstinate diarrhæa; many of the patients had eight or ten evacuations in six or eight hours, which were followed by short intervals of ease; but neither the quickness of pulse, thirst, nor any of the febrile symptoms were in the least abated by the discharge, altho' it was so frequent and profuse.

In short, the diarrhæa was evidently *symptomatic*, and only procured a respite from pain by evacuating the offending bile:

CHILD-BED FEVER. 51

bile: It depended so very much upon the fever, that whenever it obstinately continued, the diarrhæa remained unconquerable; and even a tho' that seemed to abate for a time, as in the case of *Juliana Thompson*, it often came on again with violence, and so continued till the patient's death, whenever there was a return of the febrile accession.

Here, the diarrhæa seemed plainly to arise from the effect of fever, which increases the irritability of all the abdominal viscera, and renders them more liable to pain and inflammation. The immoderate secretion of bile, was also manifestly the effect, and not the cause of fever; which from its acrimony and redundance increased the purging, by stimulating the intestines to expel their contents. On the contrary, when the pulse abated in frequency, and the inflammatory symptoms subsided; the purging was proportionally less, and even when it continued longer than

than usual, it was not then attended with the same loss of strength, but appeared simply colliquative.

About the second day after the cold fit, the patient complained much of pain at the pit of her stomach, darting down towards the navel, and sometimes from thence to the short ribs and sides: Now and then, as the disease advanced, some had acute pain under the shoulder-blade, which struck obliquely downwards and forwards, from the thorax to the stomach; these pains were always most violent and intolerable during inspiration, which became interrupted and desultory, or in these other words, they breathed with difficulty and as it were by jerks. Some had a cough, which generally was most troublesome in the decline of the disease.

In several, the belly began to swell about the third or fourth day, from the commencement of the fever, and became extremely tense and prominent, as in the case

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of *Juliana Thompson* and *Margaret Walker*, both of whom died. Whenever this swelling came on whilst the purging continued, and especially if it closely followed the pain, extending from the stomach to the navel; as far as I had an opportunity to observe, it was always a *mortal sign*; for not one of them recovered who were thus affected,

This morbid enlargement and tension of the abdomen supervening the pain at the umbilical region, should however be distinguished from the accidental swelling of the belly from the confinement of air in the intestines, which sometimes happens by a sudden cessation of the purging; and which will soon go off without danger by the use of laxative medicines.

About this period of the disease, the patient had a wild, distressed, eager countenance, and a trembling hand; a local *crimson color* appeared in her cheeks; her lips were of a *livid hue*, and her nostrils
tense

tense and expanded. When these symptoms prevailed with violence, neither art nor nature were sufficient to procure relief.

The Lochia from first to last, were not obstructed nor deficient in quantity, neither did the quality of this discharge seem to be in the least altered from its natural state; a presumption that the uterus was not at all affected. Of this circumstance I was convinced, by making considerable pressure above the pubes with my hand, which did not occasion pain; but when the same degree of pressure was applied higher, between the stomach and umbilical region, it became intolerable.

Hence it appears, that the uterus is not originally affected, so as to produce this fever, neither does it usually suffer by sympathy, in proportion with the other parts, as will be more evidently shewn hereafter.

The secretion of Milk was generally interrupted by the attack of the cold fit, and sometimes

CHILD-BED FEVER, 33

sometimes it was almost taken away; at other times it continued in a moderate degree for several days after, even 'till within a short time of the patient's death.

A slight chillness usually precedes the coming of milk, which is often mistaken for that morbid shivering with which this fever commences; but with a little care, it will not be difficult to distinguish the one from the other; for, the first happens before the milk is collected, and is usually followed by a plentiful flow of it; but the last, generally comes on after a secretion of that fluid is begun, which not unfrequently afterwards carries it off. From mistakes of this kind, I have sometimes been called in where there was no occasion; for when the disease was ripe, and many died, the least appearance of it was very alarming to child-bed women, and those about them. Indeed, when a slight degree of this morbid shivering comes on exactly at the time of the milk-fever,

fever, a very good judge might then be mistaken; but a due attention to the nature and violence of the symptoms which speedily follow, will soon set him right.

Now and then there was a little difficulty in making water, but this was merely an accidental symptom, and not peculiar to the disease; for it often happens after laborious cases, where the neck of the bladder is slightly injured.

The urine was smaller in quantity than usual; when cold, it was generally reddish and high coloured at the beginning of the disease, and often without the least separation or sediment; but as it advanced, there was sometimes a whitish cloud in it, which floated near the surface, and when more crude and dense, sunk towards the bottom. It was also now and then of a whey-color, with a whitish oily pellicle on the top, and when it deposited sediment, it was generally chalky and not lateritious. But the appearance of urine was continually
varying,

varying, and afforded very little information in the cure; for in some of those where the sediment was copious, though the bark was immediately administered, the fever returned and the patient died.

They had very little appetite for food, and no profound, natural rest; their slumbers being disturbed by frequent moaning and startings; when they waked they seem'd confused, and not in the least refreshed; they generally slept with the mouth half open, and their eyes were imperfectly closed.

A perfect *crisis* seldom ever happened in this fever; it takes such severe hold of the constitution at its first onset, that the vital powers languish, and are unable to produce that salutary event. Indeed, the supuration of the *omentum*, may be looked upon as a critical abscess, though of the unfavorable kind; for it seems to be an unsuccessful endeavour of nature to free herself from the morbid cause; but, wanting sufficient strength to throw it to the sur-

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face

face of the body, it falls upon the interior parts essential to life, and therefore unavoidably becomes mortal.

Sometimes there was a manifest remission of the symptoms, but where that was not attended with universal sweat, or copious discharge of turbid urine, it was seldom lasting; in short, when the secretions are only partially promoted, the crisis is imperfect, and the patient is subject to relapse.

Some of those who survived, recovered very slowly, and were affected with wandering pains and paralytic numbness of the limbs, like that of chronic rheumatism. Some had critical abscesses in the muscular parts of the body, which were a long time in coming to suppuration, and when broke, discharged sanious ichor; as in the case of *Elizabeth Walters*. Others were affected by a slow remitting fever, with great loss of strength and dejection of spirits; and several were so helpless and enervated, that they
had

had involuntary stools a considerable time after the dangerous symptoms were over.

When the disease proved mortal, the patient generally died on the 10th or eleventh day from the attack: The longest I have known any one survive, was *Juliana Thompson*, who lived fifteen days; and the shortest time of being cut off, was in the case of *Harriot Truman*, who lived only five days. Most of them had the clear and distinct use of their senses to the last, and generally expired calmly, without any apparent agony or convulsive struggle.

As they became more and more exhausted, and within a few hours of death; the pulse, which was exceedingly quick, and almost imperceptibly weak, at last was insensibly lost in a tremulous flutter.

Many authors, particularly the celebrated *Baron Van Swieten*, and *Levret*, supposed this fever was occasioned by *metastasis*, from morbid translation of corrupted milk, or

putrid obstructed lochia, to the brain, or contents of the thorax and abdomen; which there produced such diseases as were peculiar to those parts, viz. head-ache, vertigo and delirium in the first; and in the two last, inflammation of the lungs, or pleura; nausea and vomitings, with a diarrhæa and pain in the bowels. Others again with *Hoffman*, imagine that it arises chiefly from inflammation of the *uterus*.

These have generally been assented to, as the most probable causes hitherto assigned, yet it will appear from the following observations, they are very exceptionable and inadequate, and not consistent with the true nature of the disease.

To quote a multitude of authors for no other reason than shewing their errors, would not only be useless but invidious: I shall therefore only consider the doctrine of those respectable modern writers already mentioned; and the more particularly,

larly, as their opinions, at this time principally prevail, and have in a manner superseded all the rest.

That the several circumstances which are supposed to relate to the cause of this disease may become more apparent ; it will be necessary to consider when, and in what manner, the *milk* is strained off in the breasts, and what are its qualities when pure, or vitiated ; and also to attend to the nature of the *lochial discharge*.

About the third day after delivery, the patient is restless, and complains of a cold, thrilling sensation towards the back and loins, succeeded by feverish heat ; the face becomes florid, the pulse more full and frequent, and at last the breasts begin to throb and enlarge, by what is usually called the coming of milk. This slight commotion, or milk fever, which seems to arise from a change of circulation, is generally terminated in the space of twenty-four hours, by a warm critical sweat ; or if the

milk is suddenly repelled by diarrhæa, in consequence of which, the febrile symptoms gradually go off,

Van Swieten supposes, that this fever is also partly owing to absorption of *lochia*, which about this time becomes purulent.

Where milk thus secreted is not vitiated by feverish heat of the body, or corrupted by remaining too long in the breasts, it may be absorbed and taken into the blood without any bad consequence; for milk being nothing but *chyle* exalted and rendered finer by passing through the glands of the breasts, and being the proper nourishment of all animals, it will easily mix with, and be assimilated into *blood*; and since every woman after delivery cannot suckle her child; Nature has so formed the lactiferous organs as to dispose of milk in this manner, when pure, without injury to the constitution.

If ever therefore, the *Child-bed Fever* is occasioned by a reflux of milk, that can
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only happen after it has been deprived of its balsamic quality, by too great a degree of animal heat, or stagnating too long in its vessels: Whereas, this disease is sometimes so suddenly produced, and attended with such remarkable and instantaneous loss of strength, as appears by a history of the symptoms, that there is great reason to believe its first impression is made upon the nerves, or vital powers of the body; and that there is neither sufficient time for the secretion of milk, or any morbid change of that fluid.

Levret observes, that this translation of milky matter usually happens, about a fortnight after the disappearance of milk*; and *Van Swieten* asserts, that experience confirms this observation†. But could it only be satisfactorily proved, that such translation of vitiated milk never happen-

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* *L'art des Accouch.* p. 150.

† *Van Swieten*, Commentar. in *Her. Boerhaav.* Aphor. Vol. iv. p. 610.

ed earlier than the time above mentioned; it would then sufficiently refute the opinion of those, who suppose it the principal cause of the disease in question; since I believe, no instance can be produced where it came on so late as the fourteenth day; for, notwithstanding what *Hippocrates* mentions concerning the wife of *Philinus*, who was seized with *rigor* on the fourteenth day after delivery, followed with obstruction of *lochia*; her case does not appear to have been truly similar to that under consideration; a rigor being common to other fevers as well as that peculiar to Child-bed Women, and the *lochia* not being obstructed in this disease.

It cannot be doubted but *milk*, may become depraved by various causes. Eating or drinking things which are improper; exposing the body to cold air; the excesses of anger or fear, will often disturb this secretion, and occasion milk to stagnate too long in the breasts; hence its natural
qualities

qualities may be changed, so as to render it pernicious ; and consequently, if it should be re-assumed into the mass of blood in this vitiated state, it will disorder the body, and create fever, which however in general, is soon carried off by some critical evacuation ; as *diarrhœa*, or *miliary eruption*. But being too long retained in the lactiferous ducts, it much oftener brings on abscess of the breast itself. Such a fever, therefore, is very essentially different from that under consideration ; the first being infinitely more mild in its symptoms, and for the most part void of danger, for I never yet knew one die in consequence of it.

Levret also has observed, that were the milk suddenly disappeared at the beginning of the disease, and afterward soon returned, the patient was relieved. But, whenever this circumstance happens with mitigation of the symptoms, there is reason to believe it is owing to a cessation of the febrile cause which

which no longer interrupts the secretion of that fluid, and which, therefore will naturally return.

When the breasts subside, and the milk gradually goes off, or is suddenly repelled, in those who do not intend to suckle; the *lochia* discharge may be observed to increase and become more fresh and sanguineous; and also continues a longer time than in those who do. It therefore appears, that at this time, a plethora prevails in the constitution, which may fall upon the interior vessels, when the milk does not freely pass through the glands of the breasts; or even should no milk be strained off, the want of it will dispose the habit to a plethoric state. For this reason, women who do not suckle, are visited with a return of the menses, even sometimes so early as in the fifth week after delivery; whereas, in those who give suck, they are naturally wanting for several months.

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Hence also it is manifest, that the female organs, after a certain age, are so disposed as to prepare a larger quantity of blood than is necessary for the support and nourishment of the body ; which in the time of uterine gestation, is consumed by the foetus, and after delivery, by the child at the breast ; but that this redundant quantity might not incommode the constitution, during the time she is not pregnant ; provident nature has ordered it off by the vessels of the uterus, once every month.

The milk indeed, is not strained off from the blood ; but as the separation of that fluid deprives the woman's body of so much *chyle*, which would otherwise be converted into blood ; the consequence, in respect to her general habit, or the fulness of the vessels, will be exactly the same.

Presuming therefore, that *suckling* after delivery, would lessen the tendency to inflammation and fever, by diminishing the fulness of the uterine vessels, as well as those
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of the contiguous viscera; an order which had formerly been made by the governors of the *Westminster Lying-in Hospital*, at my request; that every patient during her stay in the house, should suckle her child, was at this time, more particularly insisted upon. For if the disease was occasioned by translocation of milk to the interior parts; it would then follow, that women who had plenty of that fluid, and in whom it was freely discharged by suckling, would of all others, be the least subject to it; but even this caution was insufficient to secure them from the fever; for many who had plenty of milk, and suckled their children, were also invaded by it.

But to come to *Practical facts*: In many women, there was a plentiful secretion of milk, which continued till the fever was considerably advanced, and sometimes it lasted 'till within a day or two of their death; in some few, where the milk was either small in quantity, or totally deficient,

cient, no such fever appeared ; and in those cases where it did, it generally came on before there was any want of milk ; which therefore, was evidently the *effect*, and not the *cause* of that disease.

Besides ; if this fever was owing to a translocation of milk from the breasts, it would also frequently happen to women who wean their children at the end of seven or eight months, which is contrary to experience. The case mentioned by *Van Swieten*, of such a morbid absorption of that fluid, in a woman a whole year after delivery, in whose pelvis, *milky matter* was found, only proves what possibly may, and not what usually happens.

Indeed from the most careful examination of the morbid appearances, in the several bodies which were opened, I have the greatest reason to believe, that what has usually been taken for *coagulated milk*, lying on the surface of the intestines, is nothing but *pure matter* ; owing to the sup-
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puration of the *omentum*, and therefore, of a peculiar kind; having a more white, thick and *curd like appearance*, than that of common matter. As to what is called *serum lactis*, it seems to be only a purulent whey-coloured fluid, collected in the cavity of the *abdomen*, by *morbid transudation* from the inflamed *viscera*; or *lymphs* become putrid by stagnating too long there, from a defect in the absorbing power of the lymphatic vessels.

The next principal cause assigned for the production of this fever, is *obstruction of lochia*, and a morbid translation of that putrid fluid to the internal parts.

A due attention to the nature of that discharge from the *uterus* called *lochia*, which is the natural consequence of delivery, will be most likely to discover whether it can have any share in producing this fever or not.

As soon as a child is born, the *placenta*, which during pregnancy, served as a medium

dium of intercourse between the mother and it; then becomes a lifeless mass without circulation or further use; and therefore, is soon afterwards expelled by the gradual contraction of the womb. As the separation of this vascular cake from the womb, is observed to be more easy at the end of nine months, than in those cases where the birth is premature; this animal process may with reason be supposed analogous to the dropping off of ripe fruit from a tree.

The *lochia* therefore, is nothing more than a simple discharge from all those vessels which are torn asunder by the separation of the *placenta* from the *uterus*, and does not naturally partake of a sanious or malignant quality, as generally supposed; for all the circumstances attending it, exactly correspond with what is observed to happen after receiving a fresh wound in any part of the body; consequently *pure blood* will first escape from those ruptured vessels, and afterwards a more dilute and colorless

lorless fluid, like the *serum*. About the third or fourth day the discharge generally becomes slightly purulent, and the *uterus* contracts, and returns to its unimpregnated state, the orifices of the several vessels are gradually closed, and the *lochia* totally cease.

Dr. *Hunter*, by whose researches, anatomical knowledge has been so much improved, was the first who discovered that the exterior membrane of the bag containing the child, called *false chorion*, is derived from the *uterus*; and as it peels off from thence like a kind of *exuviae*, or slough, at each succeeding birth, he gives it the name of *membrana decidua*.

By means of the lochial discharge, the internal surface of the *uterus* is freed from the putrid remains of the false chorion, which dissolves and comes away in a fluid state; and since there is nothing in its quality but what is common to the digestion of a fresh wound; it is not rational to suppose

pose it can produce a fever so destructive to child-bearing women, even allowing it to be obstructed.

I have often observed the *lochia* small in quantity, and at other times redundant, without any bad consequence : This seems chiefly to depend upon the difference of habit in different women, and the lax or tense state of the uterine fibres ; so that the indication of danger is not to be taken from the quantity of discharge, but from the nature of the symptoms attending it ; and where there is no pain, inflammation, or fever, in the first case, or loss of strength in the last ; it would be highly improper to direct medicines either to restrain or promote it.

Besides this error of prescribing remedies where none are necessary ; there is another so prevailing in practice, and so pernicious in itself, that it deserves to be remarked, viz. that of giving *emmenagogue* or uterine medicines, as they are call'd, to promote the *lochia*;

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For those being chiefly of the heating kind, as *aloes* and the *pulv. e. myrrh. c.* or else such as act by their powerful effluvia, as *assafetid. castor*, and the like, are so far from being proper where there is obstruction of this discharge, that they are manifestly injurious, and would be as dangerous to the patient, under such circumstances, as forcing medicines given in nephritic cases, during the height of pain and inflammation. In short, all irritating medicines are improper, in every painful or inflammatory affection of the *uterus*, and are therefore to be rejected in favor of gentle evacuations, plentiful dilution, and cooling regimen.

When the *lochial discharge* becomes foetid, it has generally been looked upon as a dangerous sign; but as this often happens without any bad consequence, I am inclined to think, it is rather owing to the admission of air, into the cavity of the *uterus* and the corruption of grumous blood contained there, than to any putrid disposition

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in the habit of body; however, it will certainly be right to promote the discharge of such confined *fordes*, as soon as possible; which may be effectually done, by the gentle alternate pressure of the hands applied to the region of the *uterus*, according to the method laid down by *Dusse*.*

Ruyfch supposed that the fluid found in the *abdomen*, like the washings of flesh, or corrupted *lochia*, was squeezed from the *uterus*, through the *Fallopian tubes*;† but in all those who were opened I never saw the least quantity of such fluid in the *uterus*, nor could observe any thing to favor so improbable a conjecture.

When the *uterus* was laid open, it had, at first view, the appearance of a part disposed to become *gangrenous*; but this was owing to a considerable quantity of *membrana decidua* or false chorion, adhering to its internal surface; for when I had

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* Acad. des Science, l'an. 1724, hist. p. 51.

† Observat. Anatom. No. 84. p. 79.

wiped away this mortified slough with a wet sponge, it was perfectly sound and in its natural state. In the case of *Ann Simms* the *os uteri* was somewhat livid and blackish, but as her labor was difficult, this was probably owing to the violence sustained, and not to any tendency in the disease itself to produce such effect; for, notwithstanding the discoloration of the part, it did not manifest the least degree of putrid dissolution, but preserved its cohesion and natural firmness. It therefore becomes necessary, not to regard any appearance as morbid, which arises from accidental causes, or such as are in themselves strictly natural.

The fever brought on by *inflammation* of the *uterus*, has often been confounded with Child-Bed Fever: but those diseases are very essentially different, although they both require the same method of treatment.

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When the uterus is inflamed, it sometimes becomes gangrenous; the head is affected with pain, *delirium* usually attends the fever, and the uterine region is so exquisitely sensible, as to render the gentlest pressure intolerable: But on the contrary, in Child-bed Fever, the head is seldom disordered, the *uterus* is not affected with pain, inflammation, or gangrene, nor doth *delirium* usually attend.

Besides these general signs of an *inflamed uterus*, there are others more fully mentioned by *Aetius* than any other writer, which particularly point out the affected parts. When the *fundus uteri* is inflamed, there is great heat, throbbing, and pain above the *pubes*; if its posterior part, the pain is more confined to the loins and *rectum*, with *tenesmus*; if its anterior part, it shoots from thence towards the neck of the bladder, and is attended with frequent irritation to make water, which is voided

with difficulty ; and if its sides or the *ovaria* are affected, the pains will then dart to the inside of the thighs.

Inflammation of the *uterus*, which often arises from a greater degree of violence applied to this part than its natural structure can bear, will generally bring on obstruction of the *lochia* ; and on the other hand, obstruction of *lochia* may produce inflammation of the *uterus* ; but although such a local affection may create fever ; it seldom proves mortal, without the inflammation is violent, and terminates in gangrene. In the first case, the orifices of the vessels opening into its cavity, are shut up, consequently the discharge will be obstructed, and not return till the tension is removed by *bleeding*, *laxatives*, and *plentiful dilution* ; in the last, they are supposed to be constricted, and therefore, *opiates* and the *warm bath*, with emollient clysters will be most likely to afford relief.

SECTION.

SECTION II.

Practical Observations and Inferences arising from the History of the Disease, respecting its Nature and Cause; with the Methods most conducive to its Cure.

THE sudden change produced in the habit, by the effect of delivery, and that alteration in the course of blood, which must necessarily happen from the contraction of the *uterus*, seem to be the principal reasons why the abdominal viscera, are at this time so liable to *inflammation*.

When the pressure of the gravid uterus is suddenly taken off from the *aorta descendens*, after delivery; the resistance to the impulse of blood passing through all the vessels derived from it, and distributed to the contiguous viscera, will be considerably lessened; it will therefore rush into those vessels with a superior force, and by put-

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ting them violently on the stretch, may occasion pain, inflammation and fever; particularly in the *omentum* and *intestines*, where they are numerous and most yielding; and this is more probable, because those arteries, before they enter the viscera, are divested of their strong, external coat,

That such a change of circulation actually happens is manifest from those faintings which sometimes follow sudden delivery; for, when the long continued pressure of the uterus is removed; the blood by gushing into the inferior vessels, will for a time, deprive the heart and brain of their usual quantity.

This contraction of the womb, also renders its vessels impervious to that blood which before passed freely through them for the service of the child during pregnancy; and consequently a much larger quantity will be thrown upon the contiguous parts, which will still add to their distension,

tion, and increase their tendency to inflammation; more particularly as the womb is abundantly supplied with blood, and receives a greater quantity of vessels in proportion to its bulk, than other parts of the body,

The immoderate secretion of *bile*, which commences about this time, in Child-bed Fever, most probably arises from the same cause; for, as the *vena portæ ventralis*, which brings blood to the liver, is rooted in the intestines, it will necessarily receive from thence a larger supply than before; hence a more copious secretion, as it is universally allowed, that the quantity of fluid strained off in any gland, will always be in proportion to the quantity and velocity of blood passing through it.

It therefore appears, that although this fever is attended with a preternatural secretion of bile, it ought not to be considered as one of the bilious kind; for the great redundancy of that fluid seems truly

symptomatic

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symptomatic, like that occasioned by pain and spasm in the nephritic colic, or other painful affections of the abdominal viscera.

At the attack of this fever, the vessels on the surface of the body, during the cold fit, are exceedingly constricted, as is evident from the paleness of the skin; and from this cause also, a greater quantity of blood is driven to the internal vessels, which will still further increase the quantity of *redundant bile*. Agreeable to this observation, the bilious vomiting was generally most violent after the shivering fit, or in proportion as that was more or less; and even when it was abated, a return of the cold fit would often bring it on again, as well as the *diarrhœa*.

From this two fold change in the circulation, the vessels of the heart and lungs will also receive more blood than before; hence difficulty of breathing, with anxiety and oppression at the breast, and *præcordia*, which are all relieved by the approach of the

the *hot-fit* ; that is, as soon as the heart re-acts and throws its blood from the centre to the circumference of the body ; and when this cannot be effected, from its want of sufficient power ; the blood will stagnate in its large contiguous vessels, and the patient will suddenly expire. Instances of this sort, though rare, have been known to happen, particularly in the cold fit of an ague, where the attack was uncommonly violent, or in diseases of the very destructive kind.

It therefore may be affirmed, that in general, every degree of *rigor* is followed by fever proportionate to it, from the re-action of the heart, which will always be greater or less according to the force impressed upon it by effect of the cold fit ; so that when it is violent and of long duration, the consequence is much to be feared ; especially as nature, by the febrile struggle, does not usually in this disease bring on a *salutary crisis*. As the heart now acts strongly, the

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the *momentum* of blood on the solids will be greatly increased, and occasion tension, pain, and inflammation, which, if not soon removed, will end in suppuration of the internal parts, and produce a *collection of matter* in the cavity of the *abdomen*, from which it cannot be evacuated, and therefore inevitably must become mortal.

If the preceding reasoning be right, it will shew the necessity of attempting to diminish the cold fit, by the plentiful use of diluting fluids given warm; and also of hot applications to the extremities and surface of the body, to relax the cutaneous vessels, and invite the blood thither, so as to relieve those of the *viscera* from distention; for whatever is the cause of this fever, its first impression seems to be made upon the nerves, which lessens their influence on the body, and prevents that free and equal distribution of blood necessary to a state of health.

To answer this intention, I would prefer an infusion of any of the grateful aromatic
vegetables

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vegetables given warm, as that of mint, sage, or elder flowers, rather than fluids of the spirituous kind; for, by their heating quality, they increase the violence of the hot fit or subsequent fever, which is the principal thing to be guarded against; whereas the former may be given at discretion, so as only to act during the *rigor*, and will afterwards become of service in abating the febrile symptoms by their diluting and resolvent power.

This tendency to inflammation will be most likely to produce violent effects after delivery, when the abdominal viscera are in a tender irritable state, both from that change of circulation already mentioned, which for a time, will render the woman's constitution weak and valetudinary, as well as the violent efforts of labour itself. That particular parts of the body are more disposed to inflammation, as the habit changes and becomes more irritable, is evident from repeated observation; for instance, in

cases

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cases of a stone in the bladder, the pain and inflammation are not continual, but only produced at particular periods from some accidental exciting cause, which at that time renders the affected part more sensible.

As long as the solids of the body continue in their natural state, they will allow of being stretched to a certain degree without pain; but as soon as they become inflamed or diseased, the least irritation or distending cause will bring on the most intolerable sensations; and this seems to be the reason why air or fœces contained in the bowels, at one time produce excessive pain, and at another none at all.

Hence also a complication of this fever, with *pleurisy* or *peripneumony*; and sometimes a delirium, phrensy, or madness attend, where the blood is more immediately determined to the brain, by anxiety, grief, or other causes which occasion intense exercise of mind. Three cases of
this

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this kind have occurred to me, in all which the disease was fatal; one of them was that of a baker's wife in *Westminster*, who remained well till the fourth day after delivery, but being suddenly disturbed with some religious scruples, she was violently seized with this fever, attended with delirium, which carried her off; notwithstanding the uncommon attention paid to her safety, by an eminent physician, who was called in at my request, and with whom I wished to have consulted, but was accidentally prevented, by being called another way.

Dr. *Hales*, in his curious *Hæmastatical Experiments*, clearly demonstrates, that the blood's impulse on its containing vessels is exceedingly increased by the violent action of the muscles, particularly those of the abdomen; he also remarks, that air retained in the lungs after a deep inspiration, has the same effect; and since the birth of a child is brought about by a combination

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combination of muscular forces, viz. from that of the uterus, assisted by the action of the very muscles already mentioned ; namely those of the abdomen and diaphragm, the last of which is pressed down on the inferior parts, at every deep inspiration ; it becomes evident, that violent stress is laid upon the vessels of the abdominal viscera, even in those labours which are strictly natural. Such are the effects of labour-pains on the whole vascular system, that the pulse which before was temperate and regular, becomes full and frequent : the complexion florid, and sometimes the face is enormously swelled, by the violent efforts and straining of the body. Till such a change is produced, women are not subject to this fever ; for I observed, that those with child, who assisted the nurses in attending the sick, were perfectly free from it, even when it was most rife ; but being delivered, several of them sickened soon after, and were affected with the same symptoms

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as the rest. This disease cannot therefore, with propriety, be called by any other name than *puerperal* or *Child-bed Fever*. Had a modern Author been acquainted with this *striking fact*, he would not probably have cavilled at the appellation. May not this circumstance added to that change of circulation already remarked, and to the great sensibility and irritability of habit observed to prevail after delivery, concur as so many exciting causes to kindle up this fever? and also shew, why women are never subject to it before, *but only after delivery*; and more particularly, during an unhealthy constitution of the atmosphere. For if this disease was owing to *compression of the abdominal viscera* in general, or to that of the *omentum* in particular, independent of any alteration in the air, as some have asserted; since this cause is the same in all gravid women, its consequences would also be more uniform, and the disease would be equally frequent at all times

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of the year, instead of prevailing with uncommon violence at particular seasons. Besides, if it was occasioned by pressure of the gravid uterus on the contiguous viscera; it would necessarily happen before delivery, when that pressure was greatest; whereas, experience shews that it never appears 'till after delivery, even in the *epidemical season*. In short, if pregnancy produced this fever, pregnant women would be subject to it, and delivery, by emptying the uterus, would not occasion but cure it; according to that universal axiom, take away the cause, and the effect will cease.

The vital powers of the viscera being thus impaired, their several functions will be unduly performed, particularly the *absorption of lymph* from the abdominal cavity; hence depravity and corruption of that retained stagnating fluid, and an increase of pain and inflammation of those parts with which it is in contact; hence also swelling of the belly, which may be looked upon

as

as a *species of tympanites*. This morbid affection did not seem to happen from wind in the bowels; for, if so, it would have subsided, by the frequency of stools, which was not the case. It was evidently owing to expansion of air generated in the cavity of the abdomen, from putrid dissolution of the *omentum*, and a corruption of purulent fluid collected there in large quantities.

The dissection of bodies thus affected, confirmed me in this opinion; for, on cutting into the *abdomen*, a putrid *flatus*, intolerable to the smell, issued forth with a hissing noise, and the prominence of the belly immediately subsided. In general, there was but little air in the intestines, which were likewise almost empty of *feces*, and only contained a blackish fluid like that voided by stool, with particles of something which looked like fat after it had been melted and become cold.

Considering the suppuration of *omentum*, and large quantity of purulent fluid found

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in the *abdomen* after death ; it is easy to see how a fever which was truly *inflammatory* in the beginning, may soon become *putrid*, by absorption of that fluid, which like *old* *leaven*, will taint the blood, and by exciting a putrid ferment in the whole mass, change its qualities into those of its own morbid nature.

The structure and use of the *lymphatics*, and their existence as a distinct system of vessels, numerously distributed to the several cavities of the body, discovered and accurately described by *Dr. Hunter*, with experiments made on quadrupedes, sufficiently demonstrate the reality of this absorption ; for it has often been observed, that although a large quantity of any warm fluid had been injected into the abdominal cavity of different animals in the living state, not a drop of it could be found after death.

Besides,

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Besides, as the *liver* chiefly receives its blood from the intestines, *omentum*, and *mesentery*, which is loaded with *oil*, absorbed by the veins from the two last parts, so as to render it fitter for the secretion of *bile*; it will follow, that, as soon as the *omentum* is destroyed by putrid dissolution; the re-fluent blood carried to the liver will be vitiated and corrupted, and passing through that large gland to mix with the general mass, will contaminate the whole, and produce a true *febris purulenta*. Hence general inflammation, adhesions of the lungs and *pleura*; a collection of putrid *serum* in the *thorax*, and matter under the *sternum*; as in the case of *Harriot Trueman*. This appears more probable, because, on enquiry of the patient's friends, I could not find she had ever been in the least subject to any complaint in the breast. Besides, as *bile*, of all the humors in the body, is most liable to be changed, this fluid, tainted with blood brought from the dis-

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eased omentum, will soon become putrid, and by its caustic acrimony create anxiety, sickness, and vomiting, with *tormina* in the bowels, and profuse *diarrhæa*; so that it will now offend in quality, as well as quantity, which last has already been sufficiently taken notice of. Before it is altered from its natural state, it seems in a great measure inoffensive to the stomach; because fresh, inspissated bile of animals, given as a medicine, does not occasion the above disorders.

Thus I think it evidently appears, that the symptoms of putrefaction were not originally such, but are produced by *metastasis*; not from that of *vitiating milk* or *obstructed lochia*, as generally supposed; but by absorption of *purulent fluids* stagnating in the abdomen, and morbid translation of matter from the *suppurated omentum*; and if ever marks of putrefaction appear in the beginning, they are confined to the *primæ viæ* only, and arise from tainted, rancid bile; for a corruption of the blood and juices never

ver happens till in the advanced state of this disease ; otherwise, such a putrefactive tendency in the habit would certainly exert itself sooner, and produce the disease before delivery ; especially in the *epidemic* season.

As soon as internal mortification commences, the pain ceases, which persuades those present that the patient is better ; but when this suddenly happens, after it has been excessive a considerable time, and in an advanced state of the disease, without any critical evacuation which could prove salutary, it is a fatal and delusive sign, and soon followed by a sinking, quick and intermitting pulse, swelling of the belly, a distressed countenance, with partial, faint sweats on the breast and face, and sometimes by delirium, which shew that death is at hand.

That acute and incomparable practical physician *Baglivi*, was the first who described

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scribed the *mesenteric fever*, and observes, that latent inflammations of the viscera, are generally the cause of those fevers called malignant, and which often end in abscess or gangrene of the affected parts, when *bleeding* has been neglected.

- In painful or inflammatory diseases of the viscera, so great is the sensibility of the several parts, that the whole nervous system is easily drawn into consent; hence a perversion or defect of their several natural functions. The heart will be affected with spasm, and not being able duly to perform its office, the pulse will become quick, weak, and intermitting. This diminution of nervous influence on the affected internal parts, will also account for the great and sudden loss of strength, and shew why the pulse is *weak, quick and irregular* in Child-bed Fever, instead of being hard and full, as in the pleurisy; and indeed, in most diseases of the abdominal viscera, the pulse becomes languid, and loses its firmness, before

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fore there can be any actual prostration of bodily strength ; as in cases of taking poison, or where a violent fit of gout suddenly fixes upon the vital parts.

As it appears that women, so long as they remain with child, are not more subject to this fever, than others who are not pregnant ; it will follow, that a distemperature of air is not alone sufficient to produce it, until it is assisted by change of habit in consequence of delivery ; but as such a change is then common to all women, it is also evident, that in general, it may be endured without much danger, whilst the season remains healthy ; since scarce one in a thousand is then affected with it ; except from *errors in diet, passions of the mind*, the effect of *taking cold*, or other manifest, exciting causes ; consequently, it will always be found most severe, whenever such concurring causes are most numerous, and in proportion as they are more or less dangerous in their own nature : Thus for instance,

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stance, it will always be found most *fatal*, when most *epidemical*, that is, during a distemperature of the air; and least of all so, when it happens in healthy seasons, from accidental causes only. If at such a time, it should arise simply from taking cold, it is often terminated by a profuse, long continued sweat; if from food offending the stomach in quantity or quality, the patient is often relieved by spontaneous vomiting or a diarrhæa; but on the contrary, if it is brought on by the violent passions of the mind, the event is different; for as the cause continues, so does the fever likewise. Besides, in such cases, there is generally a defect in the natural secretions and excretions, and as nothing will weaken the vital powers of body so much as distress of mind; a salutary crisis is then very seldom known to happen.

I have also observed, that this disease generally comes on about the second or third day after delivery, and that
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the sooner it attacks the patient, the more she is in danger. The sensibility and irritability of body, which are always observed greatest at that time, seem to account for the first of these circumstances, and also shew why the fever is then most dangerous in its event; seeing, that this predisposing cause existing in the habit, will then most powerfully co-operate with, or increase the agency of any other external cause, which may chance to occur.

From this preceding history of the *Child-Bed Fever*, joined to its morbid appearances already mentioned; the following conclusions may be drawn by way of recapitulation.

First, that it does not arise from a translocation of *corrupted milk*, or *obstructed lochia*; secondly, that it is not owing to *inflammation* of the *uterus*; thirdly, that a certain *mecanical change* produced in the body by delivery, is the principal predisposing

sing cause of the disease, and the reason why
 it is *peculiar to women after delivery only*;
 fourthly, that whenever it is remarkably
 frequent and fatal at particular seasons, its
 proximate cause ought to be referred to a
noxious constitution of the air; which was
 still more fully proved by those cases,
 where the fever suddenly appeared in the
 epidemic season, without any other evident
 cause whatsoever. Fifthly, that it may
 sometimes happen in the most healthy
 seasons, from the *accidental causes* already
 enumerated, and that in such instances, it
 is least dangerous; sixthly, that the tem-
 porary change brought upon the habit, by
 delivery, may generally be endured without
 producing this fever, if none of the causes
 already mentioned then happen to super-
 vene; and also that women are more or
 less subject to the impression of all such
 causes, in proportion to the sensibility
 and irritability of their habit: Lastly, that
 it is not owing to the pressure of the gra-

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vid uterus on the *abdominal viscera* in general, or the *omentum* in particular ; for if so, pregnant women would be more subject to it, than those lately delivered, consequently it could not be *Child-bed Fever*.

I have been more diffuse in what relates to the *Pathology* of this disease, because, nothing will tend so much to establish a rational method of cure, as those *observations which immediately result from the disease itself*; the *structure and use of the several affected parts*, and their *morbid appearances after death*.

In the *Child-bed Fever*, therefore, as well as all those, which like it, are truly inflammatory, and uniformly produce *internal suppuration*; *bleeding* is the only remedy which can give the patient a chance for life; especially, as local inflammation, if violent, more frequently terminates by a fatal suppuration than any other way, where that has been neglected.

Indeed,

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Indeed, from the strictest attention to the several symptoms and circumstances of this disease; without shaping a theory to coincide with any particular method of practice; the reasons for bleeding are as manifest and cogent as in the *pleurisy* itself, where an *empyema* is sometimes brought on; for a collection of matter in the thorax or abdomen are equally fatal.

The principal objections by those who are averse to bleeding, are as follow. Considering the loss of blood after delivery, and subsequent lochial discharge, it would exhaust the patient's strength too much, especially as she is usually enjoined abstemious diet for several days after; that by lessening the strength, it would prevent a crisis; increase irritability of the body, and aggravate all the symptoms of this fever, or dispose it to become putrid. But those are groundless objections and plainly contradicted by what may be observed in practice; for the violence of fever, and

and *symptomatic purging* arising from it, will be found to sink the patient's strength much more than loss of blood, which, on the contrary, by removing tension and pain from the bowels which act as a stimulus and keep up the diarrhæa, will have the effect of an *anodyne*, and more safely abate that discharge than either opiates or astringents, both which are highly improper at the beginning of the disease. *Bleeding*, by diminishing the quantity, and force of the blood through the liver, and larger internal vessels, will likewise lessen the *secretion of bile*, and therefore relieve the sickness and anxiety at stomach, as well as difficulty of breathing and oppression of the *præcordia*.

Besides, I am inclined to think that women after delivery, especially those who do not suckle, are able to bear the loss of blood much better, than is generally imagined; for as the foetus does not then demand its long-accustomed supply of nourishment,

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ishment, it will revert to the mother, and gradually create a temporary plethora, as already observed.

It ought also to be remarked, that neither *inanition* or *plethora* are natural to the body in a healthy state; that one extreme is hurtful as the other, and will produce irritation in as high a degree; for in plethoric habits, where the vessels are overcharged and violently upon the stretch, all the symptoms of irritability are evidently increased. The same quantity of light which did not offend the eye in its natural state, becomes intolerable to it when inflamed; and the ear is not able to endure the least noise, without being disagreeably affected, after being seized with inflammation.

To proceed, *early and copious bleeding*, at the onset of the disease, will prove much more serviceable than afterwards; thus, eight, or ten ounces of blood taken away at first, will afford more relief than
twice

twice that quantity at different times. By the first method, tension of the vessels is suddenly taken off, and the *pain, fever, and inflammation* are thereby abated. The whole vascular system being now relieved, a more free and equal distribution of the blood will follow, and the natural secretions being more duly performed, a *salutary crisis* may the rather be expected. On the contrary, where the vessels have remained long on the stretch, and being as it were overstrained, have lost their resisting power, all the above symptoms will be increased; and although blood should at last be drawn, if the inflammatory symptoms have run high, and *matter has begun to form in the omentum, or any of the vital parts, from which it cannot be evacuated; it is then too late to expect relief*; for the disease must necessarily become fatal, both by a dissolution of parts essential to life, and the confinement of that purulent fluid, which will not only corrupt and destroy the surrounding *viscera*,

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but by its absorption will soon taint the whole fluid mass; so that although bleeding in the beginning, is the principal remedy to be depended on, it will *seldom prove of service after the second or third day of the attack*; and if directed later, will only further exhaust and enfeeble the patient, and hasten her end.

Considering the languid state of the patient, and weakness of her pulse, even in the beginning of this fever, I was surprized to find the inflammation had sometimes run so high and made such rapid progress, as to produce matter in the abdomen, so early as the *fourth or fifth day* after the first attack, as will appear in the case of *Harriot Trueman*; which fully proves the necessity of bleeding *early, or not at all*.

Practitioners, from a scrupulous attention to their reputation, are generally sparing in the application of such remedies as have been doubted in their good effects, by those of the profession, or even where vulgar

gar prejudices have been violent in opposing their use. It is no wonder therefore, considering the weakness of pulse so remarkable in this fever, with the objections already mentioned, that *bleeding* should have been directed with an uncommon degree of caution; for where blood was drawn at all, it was only in *trifling quantities, and seldom till the decline of the disease*, where every thing else had been tried in vain; and consequently where *matter being formed*, neither that evacuation, nor any other human means, could possibly avail. Thus, the misapplication of this remedy, plainly appears to have been the reason why it was not sooner adopted as safe and beneficial.

In short, as no *purulent matter* can be formed without *preceding inflammation*; and as no means have hitherto been found so effectual in abating inflammation, as *bleeding, laxatives, and plentiful dilution*; those, who cannot see the absolute necessity for their use, must certainly shut their eyes on all conviction.

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As the cure will be found to depend principally on the seasonable loss of blood; it will be requisite to regard all such indications as may be taken from the *pulse*, and to lay down such rules and cautions as particularly relate to this circumstance.

Nothing will so clearly point out the time when this remedy ought to be directed, as a previous acquaintance with the natural state of the pulse, which is found to vary exceedingly in different habits of body: A difference in the size and distribution of the artery constituting the pulse, will also occasion very different impressions on the finger in regard to its strength or weakness; consequently, it ought to be alternately felt in each arm of the same person. The general habit, age, and manner of living, will also afford great information in this particular; for instance, if the patient is young, and previously enjoyed an uninterrupted state of health, with a keen appetite and good digestion; when the pulse

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in such a person seems to sink in the very beginning; such a sudden alteration arises from oppression, and not weakness, and requires immediate loss of blood; particularly, where no profuse evacuation had preceded, such as hæmorrhage, diarrhæa, or long abstinence, anxiety of mind, with want of rest, or great bodily fatigue. On the contrary, if she has been of a valetudinary, hysterical habit, with lax fibres, bad digestion and pale aspect; a languid pulse, with such appearances, may reasonably be imputed to a real want of bodily strength rather than oppression; and consequently, bleeding ought to be omitted.

We are also told, that on compressing the artery at the wrist, with the finger, if from being small and apparently weak, it suddenly becomes more strong and renitent; we may be sure it is oppression; and not weakness, which then prevails. This, however, I think, is not an opinion well founded; for whether the artery beats languidly

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from real weakness, or the diminished impulse of the heart, or whether the action of the arterial system is overcome by too great a plenitude of vessels; the effect will be nearly the same in both cases, and the artery will act weakly on the touch.

The degree of strength may be better known by attending to the more obvious signs of strength or weakness, and by regarding the slowness or frequency of pulse; for, in proportion as bodily strength is exhausted, it increases in frequency; and on the contrary, when the strength remains unimpaired, the number of pulsations are proportionably less; but being both more full and strong, the circulation is then more uniformly carried on than when the artery beats quicker; for the free distribution of blood through its vessels, does not depend upon the frequency of the heart's contraction, but on the degree of strength and energy with which it acts at each pulsation.

But

ON CHILD-BED FEVER. III

But the most secure way of proceeding in doubtful cases, will be to feel the pulse during the time that blood is flowing from the vein; if its strokes become more strong, ample and free, the quantity to be taken away may be increased; but if it sinks and loses its equality and firmness, the bleeding orifice should immediately be closed. However care is to be taken, lest we are imposed upon by that languor of the pulse, brought on by compression of the artery, by an over-tightness of ligature round the arm.

It was necessary to be more particular on this head, as there is great difference between *nature oppressed*, and *nature exhausted*; and as the safety of the patient principally depends upon a true distinction between real want of strength, and that which is only apparently so.

Without we are previously acquainted with the natural state of the pulse, and its number of strokes in a minute, when the

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body is in health; little information can be had when we are told it beats a hundred and twenty, or any certain number of strokes in a minute, during the time of disease. I have therefore, in the history of the cases which follow, rather chosen to signify the degree of feverish heat, by the general terms of weak and strong, quick or slow, as applied to the pulse, than by mentioning the precise number of its strokes in a minute.

From these preceding general Observations, the indication of cure may be taken. Hence it will follow, that *bleeding* ought to be directed at the *very onset of the disease*; secondly, that it will be necessary to diminish the violence and duration of the *cold fit*; thirdly, the redundant, *corrupted bile* is to be evacuated and corrected as soon as possible; fourthly, that the *diarrhœa*, when excessive, ought to be restrained by emollient, anodyne clysters, and gentle sudorifics, or even by opiates, and mild astringents,

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gents, when the patient's strength begins to sink under the long-continued discharge; and lastly, where signs of *putrefaction*, or an *intermission* of the fever appear; that antiseptics and *Peruvian bark* may be freely administered.

The choice of remedies is often matter of great difficulty, even to those most conversant with the nature of diseases, and after that is determined, it is not so much the medicine itself, as its application, which renders it truly salutary; for as things derive their value from their proper use, so efficacious medicines injudiciously administered, like blessings perverted, are of all others *most dangerous*; since whatever is powerfully good, if properly given, will become as powerfully bad, when misapplied,

As it is of great use to discover by fair trial, what medicines are principally to be depended upon in the cure of particular diseases; so it would be highly serviceable if
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those in practice, conscious of their own upright intention, would also venture, candidly to point out such methods and medicines, as they had found either *useless* or *prejudicial*.

Dutean and the French writers in general are great advocates for the use of *Camphor* in the cure of this disease ; and Dr. *Störck*, who seems to have copied them, recommends its liberal use in a mixture of Peruvian Bark. For common drink he also directs the almond emulsion with one dram of Camphor to every pint ; and clysters to be injected twice a day, with one dram of Camphor dissolved in broth by the assistance of Gum Arabic. From this method and the omission of blood-letting, he tells us that all his patients happily recovered. Happily indeed, if such was the event ! For my own part, being honestly solicitous for the safety of my patients, and the improvement of medicine, rather than the establishment of particular doctrines, I
should

should rejoice to find the success of this method verified by the *test of future experience*, which alone will best determine its effects. I confess, however, my doubts at so general an assertion, especially when I look back on the fate of *Extract Cicuta*, after being usher'd into practice with such extravagant encomiums by the same author.

As I have chiefly taken these remarks from the second part of the *Foreign Medical Review*, I think it proper to conclude them in the words of the author of that publication, as follows:

“ If what the author (*Störck*) here relates be true, this method would doubtless be preferable to any other; and his veracity in this point, may, we think, be determined by those who have the inspection of Lying-in Hospitals. We shall only remark, that all medical books published at Vienna, in which Dr. *Störck*, or whoever presides over the faculty, are so much flattered,

flattered, as to render us suspicious, in respect to the truth of the observations they contain."

In general, I think too much is attempted by medicines; and as their proper application requires skill, so it ought no less to be deemed true medical knowledge, to determine when it is better to stand still, and watch the operations of Nature, rather than to proceed in the dark, and run the risk of thwarting her salutary endeavours. By such means some diseases either become tedious in the cure, if happily they are cured at all; which in a manner left to themselves, or treated by simple remedies, would perhaps be terminated more favorably; especially where the habit of body is good, the viscera sound, and the natural secretions neither greatly defective or perverted.

Nothing can be more blameable than that precipitate and desultory method of flying from one medicine to another, at
the

the appearance of every new symptom; without waiting sufficient time to observe the effects of any; it is indeed prescribing for the *symptoms only*, instead of the cause of the disease, from which they spring; and is not acting more rationally than he who should attempt to clear his garden of weeds by only plucking off their leaves.

In regard to loss of blood, the quantity to be taken away is not so much to be determined by its appearance, as the degree of pain, fever, and difficulty of breathing; for its *fixiness* is not uncommon in *pregnant women*, even in a state of health; and in diseases of the inflammatory kind, it seems to be the consequence, and not the cause of inflammation; for the first-drawn blood is seldom ever so *fizzy* as that taken away after continuance of the fever.

When the patient is young and plethoric, the pulse full, thirst great, the skin dry, and the urine high colored; she may lose eight or ten ounces of blood, in the beginning

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ning, with great safety and advantage; and a smaller quantity may afterwards be repeatedly taken away, in proportion to the violence of the symptoms.

Large draughts of warm tea, or any other diluting liquor may then be given, and afterwards, bladders half full of hot water may be wrapped in flannels and applied to the soles of the feet, the *axillæ* and sides, in order to lessen the violence of the cold fit, and keep up the circulation in the extremities and surface of the body, where it is most languid.

One would have imagined that the *warm bath* bid fairer to answer this intention than any thing else, as it acts like a universal fomentation applied to the bodily surface; and the rather, since it has been found to procure almost instant ease in other disorders of the bowels; but to the confusion of all theory, in those cases where it was tried, it by no means answered my expectation; and from what I could learn,

succeeded

succeeded no better with others; for the greatest part of those died for whom it was directed: This however, in some measure, might be owing to want of bleeding, which was generally neglected in the beginning; or because, like that, it was made use of too late, viz. after the *formation of matter* in the abdomen.

Upon the whole, the warm bath, by first acting as a resolvent, from absorption of aqueous particles into the blood, will soothe the nerves, relax the skin and enlarge the pores, and therefore, tend to promote a free perspiration, without heating the body; and as I am still inclined to think favorably of it, when seasonably applied after bleedings, could wish to recommend it as a remedy which deserves further trial.

When it is thought necessary, a bathing tub near two parts full of warm water, may be placed at the patient's bedside, into which she may be gently lifted, and suffered

to

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to remain for ten, fifteen minutes, or longer if she does not grow faint; when taken out, a clean, warm sheet may instantly be applied all over her body, to sponge up the moisture; after which, a loose flannel gown, long enough to come down to her feet, may be put on warm next her skin, and draughts of any thin diluting fluid may then be given in bed, to promote perspiration. The bath should only be of a temperate heat, otherwise, instead of relaxing, it will crisp the fibres of the skin, and defeat the purposes for which it was intended.

To evacuate offending bile from the stomach, nothing proved more effectual than the following emetic:

R. Tart. emet. gr. ii.

Aq. alex. simp. ℥ iss

Oxymel. Scillit. ℥ iii misce.

It acted much sooner than *ipecacoanha*, and did not bring on such intolerable and long-continued sickness after its first operation; which

which perhaps might be owing to a more perfect solution of antimony by the acidity of oxymel; it also seems to possess a febrifuge quality, and disposes the patient to sweat; an effect probably arising from what is common to other emetics which produce that effect by agitating the body.

When the nausea and sickness are violent, the emetic should be weaker; but if the stomach is scarcely affected, it may then be wholly omitted, and a *gentle laxative* given after bleeding, which will procure a free discharge of bile.

Bleeding ought generally to precede the emetic for reasons already given; and also because the abdominal viscera will suffer less from the efforts of vomiting when the vessels are more empty.

After most of the bile has been rejected, by spontaneous vomiting, or the emetic draught; the putrescence, or rancid acrimony of what remains,

should

should also be corrected. Astringent vegetable juices seemed most likely to answer this intention; as those of oranges, lemons, &c. I therefore, at first directed them in draughts of weak tea, or barley water; but such was the tenderness and irritability of the intestines, that, by the continuance of this method, the patient would soon have been purged to death; consequently they were immediately laid aside. We also tried the *saline mixture*, where the acid was exactly neutralized, and which, on many accounts, promised fair for a useful medicine; but that likewise proved so purgative, that it could seldom be safely continued without the addition of *sperm. ceti* and *gum. arab.* which rendered it more soft and friendly to the bowels; although even this alteration was not always sufficient to remedy the inconvenience complained of.

The following draught, which is purposely directed in a smaller quantity than usual, may be given every four or five hours, or at any time as occasion requires.

Sperm.

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R. Sperm. Ceti
Mucilag. Gum Arab. aa ʒss bene
tritū & subactis, sensim adde
Succ. Limon. ʒss, cum
Sal. Absinth. saturat.
Aq. Cinnamon. Simp. ʒi
Syr. balsamic. ʒi, misce.

Saline mixture given in a state of effervescence has sometimes been known to stop the most violent bilious vomitings, where every thing else had been tried in vain.

The frothing or conflict which arises on mixing the acid and alkali, seems more properly ebullition than fermentation; yet there is reason to believe the effect of this medicine given as above, is produced by something similar to what the Chymists call *Gas Sylvestre*, or the effluvia escaping from fermenting liquors, which will sweeten and restore flesh that was become putrid and stinking.

So powerfully antiseptic is this *subtile* gas, that we are told, the plague at *Marseilles* was stopped by its influence; for that dreadful calamity suddenly ceased soon after the *vintage*; owing, as was supposed, to the vapors arising from the vast quantities of *fermenting new wines* made there.

Where this fever proceeds from the violent passions of mind, and attacks those of plethoric habits attended with *delirium*; an emetic would be very improper; half an ounce of lemon-juice, in a tea-cup full of water, may therefore, be given, upon which, a scruple of sal absinth. dissolved in the same quantity, may be drank immediately after; so as to produce an effervescence in the stomach, from which none of the subtile effluvia can escape; and therefore it will still more effectually answer the intention of correcting the corrupted bile, especially if the alkaline salt is allowed to predominate; for the process of
sweet-

sweetening and purifying *rancid train* oil depends chiefly upon its antiseptic principle.

This mixture will also evacuate gently by stool, which is more necessary, where no emetic has previously been given.

Those who direct medicines in this disease are extremely divided in their opinion concerning the diarrhæa; being in doubt whether it is *critical*, or *symptomatic*.

An evacuation happening so early as to usher in the disease, cannot properly be considered otherwise than *symptomatic*, as I have already endeavoured to shew; but wherever the case appears perplexing, the best and surest way will be to keep a watchful eye on the patient; if she is much relieved by the appearance of this, or any other discharge, it never ought suddenly to be suppressed; but on the contrary, if the symptoms, which before prevailed, either continue without mitigation, or are aggravated; and above all, if her strength

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begins hourly to sink and decline; such an evacuation should speedily be restrained, or totally taken away, if it is in the power of medicine to do it; without losing time in making finical distinctions, more ingenious than useful. But however simple and obvious this practical observation may appear, it has not been sufficiently attended to.

When the diarrhœa is *truly critical*, which is seldom the case, it commences later; the stools have more consistence and are of a yellowish hue, the belly is soft, appetite and sleep return, and the patient is much relieved. On the contrary, in the *symptomatic diarrhœa*; the stools are black and slimy, at last becoming watery, and sometimes of a dark olive-color, or like that of rusty iron; thirst and fever continue, and the belly is tense and painful.

But altho' the diarrhœa is not strictly critical, it manifestly affords relief in the early state of the disease, and therefore ought not to be stopped by *opiates or astringents*, which

which I found injurious, especially in strong plethoric habits, where bleeding had been neglected : By constipating the bowels, they concentrate the *fordes* collected there, and if the purging does not return; great oppression at stomach will follow, with increase of thirst, sickness and nausea : In short, whenever these medicines are thus unseasonably administered, they will always be attended with the worst consequences, and aggravation of all the feverish symptoms, as I had frequent opportunities of observing.

On the contrary, when the body is kept laxative, the intestines are unloaded of their putrid contents; sickness and oppression are relieved, and the fever is considerably abated.

Emollient clysters prepared from fresh animal substances, should next be frequently administered, and the longer they remain with the patient, so much the better, as they will then more effectually cherish the

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bowels by their gentle warmth and relaxing vapor, and act as internal fomentations to the whole abdominal viscera; besides, by being absorbed, they will dilute the blood and become resolvent.

Seven or eight ounces of chicken or beef water, or a weak decoction of chicken guts, without fat, salt, or any other addition, will answer the purpose; but all such clysters should only be given milk-warm, and in small quantity, otherwise they will distend the intestines, and by creating pain will soon be forced away.

Whenever the bowels are affected with pain, *opiates*, after evacuations, are best given in clysters; being then immediately applied as it were to the naked nerves of the diseas'd part; hence they diminish irritability of the intestines, relieve pain, procure sleep, and are less liable to affect the head, than when given by the mouth; Thus, gr. xxx of *tinct. thebæc.* may be added, as occasion requires.

Clysters

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Clysters of the cathartic kind, are also necessary before the use of purgatives, when the patient has been long constive; for where the last have been given and do not readily pass off; severe gripings and tormina will follow,

Some are so timorous, that they will not venture to give *laxatives* till the fourth or fifth day after delivery, lest they should check the *lochia* discharge, or bring on a dangerous purging; but these are unnecessary cautions, for I never knew the *lochia* interrupted, nor any diarrhæa brought on by their seasonable and proper use; but on the contrary, the last will often suddenly happen, where the body is suffered to remain too long constive, in consequence of the intestines being over-distended with indurated fœces, which create pain, and stimulate them to frequent expulsion,

Head-ache, delirium, or fever, are sometimes brought on by omitting the use
of

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of laxatives, which may be given with safety at any time, but are indispensably necessary about the second or third day after delivery; especially in strong habits, where the patient does not intend to suckle her child. In short, when the body is kept cool and temperate, by a *solutive regimen*, the better chance she will have to avoid fever, and the more regularly will all the natural secretions and excretions be carried on.

The following laxative mixture, which is extremely gentle and pleasant, may be directed in the quantity of two or three spoonful, or more, every two or three hours, till it produces its proper effect.

R.

Ol. Ricini, cum Vitel. Ovi solut. ʒi

Mann. calab. ʒss

Aq. Hyssop. ʒvi fiat Mistura.

As soon as the bowels are sufficiently emptied, the following *antimonial powder* may immediately be administered;

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stered, but sometimes it proves violently irritating, even in very small quantities, and will produce a dangerous superpurgation if not managed with the greatest caution; if this should happen, five drops of *thebaic tincture* may be occasionally added to each dose of the julep in which it is to be given.

R.

Tart. emet. griss

Magnes. alb. ʒi

accurate contere et fiat pulv. in sex portiones dividendus, quarum sumat unam ʒa. quaq. hora, vel subinde pro re nata, cum Cyath. Julep. sequentis.

R.

Julep. & Camphor. ʒ vii

Aq. Cin. spt. ʒ ss. misce et fiat

Julepum ut supra exhibend.

When the first or second dose of powder produces no sensible effect, it ought to be given oftener, and in a larger quantity, till it either creates *nausea* or *gentle perspiration*;

perspiration, without which, it seldom procures lasting relief. They should then be given by longer intervals, otherwise they will be apt to weaken the patient; however upon the whole, I know nothing better than *emetic tartar* in very small doses, with the addition of an *opiate*, if necessary, particularly after profuse evacuations; for it not only seems to combat the fever, but much more safely and effectually restrains the diarrhœa than astringents; by promoting perspiration and exciting nausea at the stomach, which, in some measure, *inverts* the excessive peristaltic motion of the intestines, and prevents their frequent discharge.

When the patient was much reduced by returns of the evening paroxysm, attended with chilness, wandering pains, dejection of spirits, torpor and coldness of the extremities; the third part of a grain of *emetic tartar*, given about an hour before its approach, afforded sensible relief, by producing a gentle sweat.

This

This sort of perspiration may be moderately encouraged by plentiful dilution with weak tea; or if the purging is violent, with rice-water, which generally agreed better with the patient than any thing else: But the sweats excited by heating regimen, which stimulates the solids, and increases their action on the blood, are highly prejudicial, and often destructive to the patient, as well as those brought on by immoderate quantities of bed cloaths, or keeping the room too hot and close: For if those in perfect health soon grow faint and languid, when deprived of fresh, pure air; the same effect in a much greater degree, will necessarily happen in the body, when weakened and oppressed by the presence of a disease.

Whenever the weather is intemperately hot, fresh air should always be allowed to breathe in at that part of the bed-chamber most distant from the patient; which

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which will gradually diffuse itself around, and revive her exceedingly, without the least danger of catching cold.

When the bowels are stripped of their mucus, they become so exceedingly tender, and the stools are so frequent, that she will sink under the discharge, if medicines of the irritating kind are any longer continued. Rice-water, used for common drink, may now be given with the addition of *gum arabic*, in the proportion of an ounce to a quart; and where the pulse is feeble and the patient much exhausted, a common spoonful of brandy may occasionally be added to that quantity, rather than wine, which is apt to turn sour on the stomach, and occasion eructation and pinchings in the bowels, with increase of the diarrhœa.

Nourishment that is light and simple should now be given often, in small quantities: Beef or chicken-water, poured from the Uregs, after the fat has been taken off
the

ON CHILD-BED FEVER. 135

the surface, and gently boiled with ground rice, and the addition of cinnamon, was found to agree with the stomach, and is extremely soft and friendly to the bowels, as it will supply them with artificial mucus, and nourish the body at the same time.

Whenever the strength is evidently perceived to sink under excess of the diarrhoea; three grains of the *pil. e. styrac.*, or the following bolus may be given at discretion, with a spoonful of cinnamon-water, or a very small quantity of any other grateful fluid. In such cases, I observed, that medicines in a solid form, were longest retained, and therefore are most eligible.

R.

Pulv. e Bolo comp. cum Opio Di

Syr. e Core Aurant. q. s. ut fiat Bolus.

Should the discharge notwithstanding continue obstinate, with severe pains in the bowels; clysters, prepared with jelly of starch and the yolks of fresh eggs, in
equal

equal proportions, and dissolved in a sufficient quantity of rice-water, with thirty or forty drops of *thebaic tincture* may be administered by intervals, as occasion requires, and will often procure immediate ease.

The progress of this disease is frequently so rapid, that there is not sufficient time to wait for a distinct intermission, as in other fevers; and therefore if the *bark* is given at all, that must be done without hesitation, at the very first favorable opportunity.

It was observed, that this disease becomes a true *febris purulenta* in its decline, from the absorption of corrupted fluids stagnating in the cavity of the abdomen, altho' it was *strictly inflammatory in the beginning*; so that the *putrefaction* at that time existing in the habit, like the fizziness of blood, bilious vomiting, and diarrhæa, is truly *symptomatic*, being manifestly the consequence and not the cause of this fever.

Indeed,

Indeed, there is reason to believe that very few diseases are putrid in the beginning ; and that all, or most of them, have a tendency to become so towards their conclusion ; when the vital powers of the body are diminished, and its juices vitiated by preceding excess, or present defect of their natural motion.

Here it were to be wished, the efficacy of that soverign remedy, *Peruvian Bark*, might secure the patient from danger ; but both reason and experience, as well as the very nature of the disease itself, in a manner exclude hopes of relief ; for, altho' its liberal use might possibly be sufficient to destroy the putrefactive tendency begun in the body, by the absorption of corrupted fluids ; yet the large quantity still remaining in the abdomen, from which it cannot be evacuated, must necessarily prove destructive ; However, as we cannot always be certain when matter is formed, all possible means should be

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tried

tried to prevent it; and the bark ought to be given at all events, in large doses often repeated.

It has been feared, the use of this medicine might suppress the *lochia*; but I am assured from repeated experience, it may be given to women after delivery, with the greatest safety whenever necessary; for, I never could observe it produced any bad effect, or diminished that discharge; but on the contrary, often altered its quality for the better; and also, rather seemed to increase its quantity, especially in weak and delicate women, where the circulation was languid.

Sometimes the bark increased the purging, and even brought it on again after it had ceased; in such cases I found it necessary to join five grains of pulv. e. bolo comp. cum opio, with each of the following draughts.

R. Cort.

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R. Cort. Peruv. pulv. ʒi

Aq. font. lbiss leni igne coq. ad demid. &
sub finem adisce.

Fol. Rosar. rub. sicc. ʒii; cola.

R. Hujus colat. ʒifs

Extract. peruv. Cort. moll. ʒi

Tinct. Cinn. ʒij

Confect. Alkerm. ʒi. fiat haustus alternis
horis exhibendus.

When the first draught was found to
purge too much, I sometimes directed the
following:

R. Cort. Peruv. ʒi

Granat. ʒiii

Aq. lbii ad demid. coq. & cola.

R. Colat. ʒifs

Tinct. Cinn. ʒii

— Thebaic gr. v.

Confect. Alkerm. ʒi f. haustus.

Blisters have seldom been applied in the cases of lying-in women, on account of their severity, especially from the fear of that tormenting complaint the *strangury*; but if, as many imagine, they produce their good effects by powerful stimulus, and raising inflammation on the skin, rather than the discharge they occasion; the application of *snafisms* would then effectually answer the purpose, without any danger of that disorder; and therefore, will deserve the preference to *blisters* prepared with *cantharides*; tho' I have not yet seen them sufficiently tried to speak from my own experience.

Notwithstanding, we are told blisters are improper and injurious, till the fulness and frequency of the pulse subsides; I would wish it ever to be remembered, that whether we endeavour to relieve the patient by this or any other means, it must be *early*, or it will not be at all; and therefore, after bleeding and evacuations, before that alarming symptom appears, which denotes *inflamma-*

tion

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tion of the *omentum*, viz. pain darting downwards from the stomach to the navel; it will be adviseable to apply a blister or sinapism to one or both sides of the abdomen.

This practice, I think, will be sufficiently justified by the great relief they afford in fixed pleuritic pains, or wherever there is local inflammation.

Volatile liniments, and penetrating topics, such as the following, have also been found serviceable, particularly where the use of blisters appears exceptionable.

R.

Ol. dulc. Amygd. ʒ iſs

Camphor. ʒſs.

Spt. volat. aromat. ʒ iii miscē.

These are the best reasons I am able to assign for the expediency of the remedies pointed out in the *Child-Bed Fever*; but I did not venture to trust to them from theory, nor expected that others should do so, till observation and experience had

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convinced me of their good effects ; particularly *early and copious bleeding*, and the *antiphlogistic method* which I am, therefore, desirous to recommend, in preference to every thing I have hitherto seen tried, for the relief or cure of that fatal disease.

scarcely justified by the great relief they afford in fixed pleuritic pains, or where-
ever there is local inflammation.

Topical blisters, and penetrating topics, such as the following, have also been found serviceable, particularly where the use of blisters appears exceptionable.

R.
Oleum Amygd. ʒij
Camphor. ʒij

SECTION
These are the best reasons I am able to assign for the expediency of the remedy pointed out in the Cold-Bell Theory; but I did not venture to trust to them from theory; nor expected that others should do so, till observation and experience had convinced

SECTION III.

Of the Prophylactic Method, or Means contributing to prevent the Disease.

THE Child-bed Fever, when produced by a distemperature of air, like the epidemic dysentery, or ulcerous sore throat, may at last become infectious; but when it only arises from such accidental causes as have already been enumerated, and which are confined to particular habits and constitutions; I believe it will then never communicate itself to a second person.

It is probable, that many diseases which are foreseen, might either be prevented or rendered less dangerous in their event, by what is called the *prophylactic method*, a branch of physic not hitherto sufficiently cultivated or attended to.

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Sydenham supposes, that of those women who fall in Child-bed, scarcely one in ten of them die for want of strength, or by what they have endured in labor; but in consequence of their rising too soon from bed; and therefore, he would not have them taken up at least till the tenth day after delivery. There is so much reason in this observation, that it ought to be duly regarded; but I think it may be said with truth, that the proportion of those dying of Child-bed Fever, compared to the number who die from dangerous or difficult labours, is at least double of that mentioned by Dr. *Sydenham*.

It is sometimes easier to avoid the approach of an evil than to find a remedy for it when present; therefore every attempt towards it will be more or less necessary, in proportion to the danger of the evil itself; and since it appears that Child-bed Fever, in the epidemic season, is frequently fatal; it would be a most desirable

sirable circumstance, and a thing of real importance, if means could be devised to secure women from its malignant influence.

I am inclined to hope that this is possible, at least in a certain degree; and the rather from what has been judiciously and experimentally laid down on the subject of *Fevers and Infection* by Dr. Lind; or, although the disease should appear, the symptoms would probably be milder, and the event more favorable.

We have observed, that when the body is endowed with exquisite sensibility, the more it becomes disposed to receive infection; would it not therefore be rational and expedient, when this disease is most frequent and fatal, to administer such medicines, *a few days before and after delivery*, as have been known to strengthen the constitution, and diminish the sensibility and irritability of the habit? If so, nothing would so powerfully contribute to this end, as the liberal use of *Peruvian Bark*,
with

with the calybeate waters, particularly those of *Pyrimont* or *Spa*. Where the nervous system is extremely delicate, and thrown into disorder from slight accidental causes, the prudent use of *opium* will also be attended with great advantage; it will restore rest to the body, and tranquility to the mind, by dispossessing it of those disquieting ideas which disturb and pervert the natural secretions, and tend to excite fever. It has been supposed, this medicine will suspend the bodily powers, and render them torpid or sluggish in shaking off diseases, but this appears too hasty a conjecture; for in women of hysteric habits, who suffer from agitation of mind, or want of sleep, and where the pulse from thence becomes quick, weak and remulous; there is not perhaps to be found a more sovereign and effectual cordial in the whole *Materia Medica*. It

It will also be necessary to caution the patient against all such adventitious causes as have been known singly to produce this fever, or to add influence to the atmosphere in bringing it on; such as sudden terror, or long-continued distress of mind; rising too soon from bed after delivery; errors in diet; or cold air admitted to the body in a full stream. Her food should be simple, easy of digestion, and chiefly of the vegetable acedcent kind; her drink may be wine and water, acidulated with orange-juice, or any of the grateful acids. She should use gentle exercise, and breathe a free open air, guarding against all sudden changes from one extreme to another. The bed-chamber after delivery, should be cool, and neither incommoded with much noise or strong light. In a word, the body should be kept still and quiet, and every thing carefully avoided which disagreeably engages attention of mind. Nothing

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Nothing will sooner dispose the fluids to putrefaction, than *long fasting* which occasions a stinking breath, and looseness of the teeth; so that animals starved to death, may be said in reality to rot alive. From this circumstance may be inferred, the great advantage of frequently taking aliment, or attemperating acescent fluids, to prevent diseases of the putrid kind; for it has been observed, they will survive a long time by the use of water only, which carries off the acrimonious salts, and rancid oils, by urine; and thereby hinders the juices from becoming putrid.

How far some of those Rules and Cautions might be conducive to the preservation of women, if duly regarded *before delivery*, I cannot from experience determine; as the patients at the *Westminster Hospital* were always received in actual labour; and considering how much people in general are swayed by opinion and vulgar prejudice; I did not chuse to urge this matter

too

too far in private practice, lest by its novelty, it should carry with it the appearance of an experiment, to which those of weak understandings are always averse, however safe and rational it might be in itself, or beneficial in the conclusion.

The pernicious custom of binding the body too tight, ought also to be avoided; as it will produce difficulty of breathing, head-ach, and oppression at stomach.

Particular odors will likewise occasion bad effects, and have an inconceivable power on some particular women of delicate hysterical habits; being sometimes known to bring on sickness at stomach, delirium or faintings.

I think it will be adviseable for the patient to suckle her child, at least for the first three weeks or a month, although the principal danger seems to be over before the end of a fortnight.

Nothing

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Nothing will so soon dispose women to this fever, as breathing a putrid, confined air, especially if it be warm and moist; for these qualities destroy its elastic power, and not only render it unfit for respiration, but also more apt to generate diseases of the putrid kind.

Peu gives a very striking and self-evident proof of the truth of this assertion; having observed, in hospitals where women were delivered in wards among the wounded, many of them died; so as to occasion a suspicion of the skill or attention of those who delivered them.* The matter being properly considered, they discovered, that this uncommon mortality was owing to the *putrid effluvia* continually exhaling from the wounds of the sick; and as a confirmation of this conjecture, it was observed, that when the number of wounded

* *Peu la Pratiq. des accouch. liv. ii. chap. i. pag. 268.*

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wounded patients increased, so did this contagious fever among child-bed women, and vice versa.

This circumstance will suggest a useful hint, which ought to be duly regarded by all those who have the direction and superintendence of public *Lying-in Hospitals*. The wards should not be over crowded with beds, in order to avoid the danger of breathing air rendered impure by too great a number of people confined in a narrow space; and also the cries of children and noise of such women as may happen to be in labor. The different wards should not only be kept exceeding clean, but also ventilated by a stream of fresh air passing through them, as they become empty by succession.

When the heat of weather is extreme; the air may be rendered cool and refreshing, as well as antiseptic, by sprinkling the boards with pure water, and vinegar; for all fluids in a state of evaporation, have been found to generate cold.

This

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This method was constantly observed at the *Westminster-lying-in Hospital*, during the epidemic season. Such wards may also be fumigated with fragrant gums, as those of *Myrrh*, and *gum copal*, with the addition of *Cascarilla bark*; but above all the steams of boiling vinegar, to which *lavendar flowers* have been added, with a sufficient quantity of *camphire*, may frequently be taken into the lungs, as the most grateful and effectual preservative that perhaps is to be found.

That excellent practical author, Dr. *Lind* observes, the admission of pure air, or the most perfect ventilation, is not always sufficient to dislodge the *infectious matter* from the place of its residence; he therefore recommends the application of *fire* and *smoke*, as the most certain and effectual means of extinguishing the source of contagion: He also advises the burning of wood fires, for, it has been experimentally found, that the smoke of burning wood

not

ON CHILD-BED FEVER. 153

not only tends greatly to abate its violence, but also to preserve the uninfected from its malignant power.

He directs the wards, or infected chambers of the sick, to be closely shut up, and then fumigated with *brimstone strewed on charcoal fires*; he further adds, that except the *plague* itself, no infection more pestilential and mortal has been known to prevail any where, than those in some ships; yet he never heard of any ship which did not immediately become healthy, after being thus carefully and properly fumigated; and if we are not misinformed, some very late accounts from abroad assure us, that the *plague* itself was prevented by methods of the like kind.

In the year 1775, when the Child-Bed Fever again prevailed with great violence, at the Westminster-Lying-In Hospital, and proved fatal to several women; I directed the beds in the wards to be taken down, the curtains to be washed, and bed-

L

cloath

cloaths placed in the sun, in a stream of fresh air : The wards being then closely shut up, were fumigated for two days with *Sulphur*, *Pitch*, and *Tobacco Stalks* strewed on charcoal fires ; after which the walls were white-wash'd, and the wards being thoroughly cleaned, were sprinkled with *camphorated vinegar*. The beds being then replaced, such was the salutary effects of this method, in putting a stop to the disease, that of several patients soon after admitted, only two were seized with it, one of which died.

Next to the smoke of burning wood, especially *spruce*, or that of the teribinthinate kind ; he esteems the fumes of gunpowder, for purifying a tainted air. All bodies, during their consumption by fire, afford a large quantity of *mephitic air*, which has been found powerfully to resist putrefaction ; and upon this principle, I believe, the good effect of the preceding method solely depends.

Experi-

ON CHILD-BED FEVER. 135

Experiments shew, that animals cannot long survive, nor flame subsist, without the accession of fresh air; even a common candle will require a gallon of this fluid in a minute. Considering therefore, that the atmosphere is continually injured by the corruption of perishable bodies, and the effect of artificial fires, with those natural, and more immense ones, proceeding from volcanos; it seemed a matter of wonder, how the air could still preserve its original purity; 'till Dr. Priestly discovered, that the perspirable matter or *effluvia of vegetables* is the grand resource, and sovereign remedy which nature applies to restore the salutary principles of air, thus injured and rendered unfit for respiration.

From this circumstance, it will appear no irrational caution, to place pots of myrtle, southern-wood, or mint in the chamber of the sick, during the *epidemical season*; as those vegetables are continually throwing off their *antiseptic vapor*. But it is to be

observed, that the good thus produced is not owing to any aromatic quality ; for vegetables of an offensive smell, and even such as were almost inodorous, were found most powerful in resisting the putrescent quality of air.

Hence the custom, with some of putting green boughs round the sick, or sprinkling the ground with new gathered leaves, and flowers, on the supposition of affording refreshment, and disposing the patient to sleep, does not seem ill-founded ; for although they were ignorant how such relief was procured, they might, notwithstanding, have sagacity enough to observe the effect was certain.

The *Matrons* of all *Public Hospitals*, in cases of extreme danger, ought to administer the medicines prescribed with their own hands; they should also take care the *nurses* do their duty, and frequently supply the patients with clean, well-aired linen ; otherwise, the warmth of weather in summer, added

to the heat of body, may occasion a corruption of the lochia, which will taint the air, and not only render it offensive, but highly noxious.

During the first week or ten days after delivery, women should wear half shifts and skirts, for the greater convenience of changing them with ease, as occasion may require.

In such *Hospitals* there ought to be particular beds or couches, for the sake of delicacy and neatness, as well as to keep the rest dry and clean : These delivery-beds, as they are called, being placed upon casters, may be brought close to another bed prepared for the reception of the patient, into which she may be gently conveyed, after resting a little to recover her strength and spirits from the fatigue of labor : This method will afford exceeding comfort and refreshment to a woman after delivery, and will

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also contribute greatly to her recovery, by removing her from the wet linen, which, otherwise, would subject her to take cold.

The mattresses and bedding should often be inspected, and frequently exposed to the sun and open air; and all foul linen should immediately be removed out of the wards, together with the putrid, bilious fluids, rejected by the stomach or bowels,

When the patients at the *Westminster Lying-In Hospital* were helpless, and unable to sit up in bed to take refreshment; they were supported by a kind of *half chair*, made for that purpose, and placed behind their backs, which was found extremely useful on such occasions.

SECTION

SECTION IV.

History and Treatment of the Child-Bed Fever further illustrated by Cases, with Practical Remarks on the whole. Also occasional Animadversions on the Section of the Pubes, as a substitute for the Cæsarian Operation.

THE reader will find that the following Cases were not set down with any intention to shew how successfully they were treated ; but rather as examples of the dangerous tendency of this disease, which was oftentimes such as neither art or nature had power to subdue : I have paid no regard to the caution of omitting some of those where it was fatal, or of inserting others when the event was favorable ; in short, I have no where put a mask on the face of the disease, or suppressed the mention of a single circumstance which I thought could prove of the least use in

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being known ; but have, at all events, described it as I found it in the *epidemical season*, and as it will be found by others, under the like circumstances, viz. dangerous in its nature, and difficult of cure.

From what has been advanced, it appears that the human body is so constructed, as only to sustain violence to a certain degree ; and therefore, if the force of a dangerous disease be superadded to that indisposition brought on the habit by delivery, it is generally then much more fatal than at any other time ; so that certain maladies which might have been separately endured, become destructive by their united power. In the *small pox*, for instance, taken in the natural way, about one in seven or eight may probably die ; but supposing those affected with it to be women at the *point of delivery*, very few of the whole number will be found to recover,

C A S E

ON CHILDBED FEVER. 161

C A S E I.

Elizabeth Waters, a young woman of a strong healthy habit, aged twenty one, was delivered in the *Westminster New Lying-In Hospital*, April the 7th, 1768. On the fourth day after, she complained of head-ach, which she said was owing to her being disturbed by another patient in labour, who lay near her in the same ward: her pulse was tolerably good, and neither very full nor frequent, but as her head-ach continued till the next morning; eight ounces of blood were then taken from the arm, which afforded her much relief. She had milk in her breasts, and the *lochia* were discharged in due quantity, without any pain or tension of the belly. Two days after, the pain in her head returned with violence, attended with thirst and fever, for which she lost seven ounces more blood: she took a laxative mixture, which had its proper effect, and afterwards the saline draughts

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draughts every four or five hours, from which she seemed better; but as the pain in her head still continued, I directed leeches to her temples the next evening, which gave her ease.

She was apparently much better for a few days, her appetite being good, and her aspect cheerful; but soon after relapsed, and was seized with severe and excruciating pains, like those of acute rheumatism, in her limbs and body: She became quite helpless, and was not able to turn herself in bed without assistance.

I attended this patient with Dr. Bricken-
den, one of the physicians of the Hospital. We directed antimonial powders, which she took as occasion required, but without much relief; as the pains continued, with a slow, lingering fever, for seven or eight days; and as they abated, were succeeded by a number of bluish discolorations on the skin, which were terminated by abscesses

in

ON CHILD-BED FEVER. 163

in different parts of her body ; As they advanced slowly, and did not point with tension and redness, but were soft and of a pale, livid hue ; we directed the *bark*, with wine and good nourishment to quicken the circulation, and assist nature in bringing them forwards, as they plainly appeared of the critical kind ; but notwithstanding they were constantly poulticed twice a-day, not one of them came to suppuration so as to break, even at the end of six weeks from the beginning of the disorder ; she was therefore removed to the *Westminster Hospital*, where the abscesses, in number *eighteen*, as I was informed, were opened, and after remaining some weeks there, she at last recovered ; and being cured and discharged, came and returned thanks at the *Lying-in-Hospital*.

CASE.

CASE II.

Elizabeth Becket, aged twenty-six, and of a healthy constitution, after a difficult labor which lasted several hours, was delivered of a dead child at the *Hospital*, *February* the 18th, 1769.

She was affected with head-ach, and sick at stomach, from the day of delivery, but did not vomit.

February 19. Her pulse being frequent, and somewhat full and strong, and the head-ach violent, I directed eight ounces of blood to be taken away; an emollient clyster was then administered, and she afterwards took the saline draughts, with *sperm. ceti* every five or six hours. Towards evening she had four bilious stools, and appeared better.

20th. Her thirst was excessive, her tongue white and dry, she perspired little, and had three evacuations by stool; she
diluted

ON CHILD-BED FEVER. 165

diluted plentifully with weak tea, and took her medicines as before.

21st. Slept little, her eyes were blood-shot and prominent, and her head-ach not abated; her skin was dry, and her pulse being stronger than usual in such cases, eight ounces more blood were taken away.

22d. She slept the preceding night; her head-ach greatly relieved, and all the febrile symptoms manifestly abated; notwithstanding, she remained weak and helpless, and had involuntary stools for a few days after; but as her strength increased, this inconvenience went off, and in a fortnight's time from the first attack, she perfectly recovered.

The *milk* continued till the fifth day, and the *lochial discharge* did not seem altered from its natural state.

R E M A R K S.

I would not here have it inferred that these two patients recovered because bleed-
ing

ing was directed ; but rather from their having this fever when the season was not *epidemic* ; for I have already remarked, that the attack is not then so violent, and all the subsequent symptoms are less severe : The shivering fit in the beginning is generally less, and the diarrhœa and bilious vomiting are either inconsiderable, or do not appear at all ; the pulse is neither so quick or weak, and the disease, instead of being terminated about the tenth or eleventh day, is often protracted beyond that period, from *acute* becoming *truly* *chronical*, and then seldom proving fatal.

Eliz. Burges was the first patient seized with *Child-Bed Fever* in the epidemic season ; she was delivered on the 6th of *December*, 1769, and died about twelve days after ; but the particulars of her case I cannot distinctly remember.

C A S E III.

Juliana Thompson, aged twenty-one, and of a delicate habit, having received a stroke
on

ON CHILD-BED FEVER. 167

on her belly, was suddenly seized with labor, and delivered in a chair as she was coming to the hospital, *December* the 7th, 1769.

She continued pretty well for the two first days, but was rather languid and dejected in spirits, having had a slight uterine hæmorrhage from the time she received the hurt to that of being delivered.

December 10. Was feverish and thirsty, and complained of great pain in her head; there was no appearance of milk, and the *lochia* were discharged in natural quantity. She took lenitive elect. with oil of almonds, which procured her two or three evacuations; thirst and fever were abated, and her head-ach was much better.

11. Continued better, and was able to sit up in bed.

12th. Her face was florid, her cheeks were beset with a deep crimson color, and her pulse was quick and weak; the tongue looked

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looked clean, though her thirst was intense; she diluted plentifully with tea and barley-water; the saline mixture with sperm. ceti was given occasionally, and a clyster of beef-water directed to be administered. Towards evening, difficulty of breathing came on, with oppression at her breast, and pain in her left side.

When I visited this patient with Dr. Ford, we directed the *tartar emetic* in the third part of a grain to be given every four or five hours, and a *blister* to be applied to her side; the emollient clyster was also repeated.

She had six or seven motions in the night, and the next day appeared easier, but was languid and weak; her pulse continued very quick, and the blister did not rise.

As there was sediment in her urine, with signs of remission, we thought it advisable to try the *bark* in decoction; but it purged her immoderately, although the
simple

ON CHILD-BED FEVER. 169

simple cinnamon-water was added, and therefore it was left off.

Next day she complained of pains shooting downwards from her stomach to the navel, for which a *volatile liniment* was applied, but as it did not procure much relief; we directed a *warm bath* the day following, in the manner already mentioned at p. 119; a long flannel gown being next her skin, she was afterwards put into a warm bed, and supplied with beef-tea and other fluids, in order to encourage perspiration.

Bladders half filled with warm water, and wrapped in flannels, were applied to her stomach and sides, where she still complained of pain and oppression, and the emollient clysters were also continued, with gr. xxx of *thebaic tincture*.

The next day her belly began to swell, though the purging still continued; she had partial, faint sweats on her breast and face, and was now extremely weak, though

M

perfectly

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perfectly sensible, but could take nothing except nourishment for several days before her death, which happened on the 25th of *December*; being the fifteenth day from the time of the febrile attack.

Margaret Walker, another patient in the same ward, was delivered on the 11th of *December*, and sickened soon after the former: They both lay ill at the same time, and labored under symptoms so exactly similar, that it would be unnecessary to set down the particulars of this last case: She died on the 21st of the said month, nine days after being seized with the disease.

CASE IV.

Mrs. T. a lady near the *Abbey* in *Westminster*; young, and of a strong and healthy habit, after a labor perfectly natural, was suddenly attacked with a violent shivering fit, the third day after delivery, being the 1st of *January* 1770:

She

She was also affected with a thrilling, uncommon sensation, as if a cold, wet sheet had been wrapped round her body.

She complained of head-ach, and was sick at stomach; during the excess of febrile heat, her pulse beat a hundred and thirty strokes in a minute, and was more full and strong than usual in this fever; her countenance was florid, and much altered from its natural state, having an unusual stare with her eyes.

Small portions of *emetic tartar*, viz. the fourth part of a grain, were given with the saline mixture, every four hours: She diluted plentifully with barley water and balm-tea, but did not perspire.

Second day after the attack, a violent bilious purging came on; the antimonial powders were then given by longer intervals; the saline mixture was discontinued, and emollient clysters were directed: She took rice-water, and the white decoction for common drink.

The fever and diarrhoea continued violent for three or four days; her belly swelled, and she frequently complained of much pain at the bottom of her stomach, and towards the navel: Sometimes there seemed to be obscure signs of remission in the morning; but towards evening, the fever again returned with violence.

As she apparently grew worse, and as I was, at that time, ill and unable to give her due attendance, I desired Dr. *Hunter* might be called in, which was accordingly done. He directed eight ounces of blood to be taken away; the clysters to be repeated, and a bladder, filled with scalded bran, to be applied warm to the umbilical region. The next day, I met Dr. *Hunter* and Dr. *Hugh Smith*: The saline draughts, with $\mathfrak{z}$ ss of *confect. damocratis*, were directed every six hours, and in other respects, much the same method was pursued as before.

When

When Dr. *Smith* visited this patient with me the day following, we found her delirious, and therefore, instead of the confect. damocratis, $\mathcal{D}$ i of the *pulv. contrayer.* c. was added to each saline draught, which was ordered to be continued as before: Four spoonful of *tincture* of roses were given by intervals and clysters of chicken-water directed to be administered frequently. The two following days I was prevented from seeing her; during which, she took medicines of the warm cordial kind, but without perspiration, or any abatement of the febrile symptoms.

A few days before her death, she was delirious; her eyes were blood-shot and filled with involuntary tears; a *miliary eruption* appeared very thick on her breast and body, and her stools, which were frequent and very foetid, came away insensibly.

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Leeches were then applied to her temples ; the clysters were repeated, and her strength was supported by nourishment and wine, but all without a salutary effect ; for on the twelfth of *January* she died ; and several hours before her death became perfectly sensible,

The *lochia* were discharged in due quantity, but there was no secretion of *milk*.

R E M A R K S.

The signs of putrefaction in this patient before death, were very evident : The smell of the room several days after she was buried being intolerably offensive, notwithstanding it had been thoroughly cleansed and fumigated with frankincense.

Purgative medicines, which are found so extremely beneficial in the secondary, putrid fever after the small-pox, cannot here be employed to advantage, because of the tenderness of the bowels and excessive loss of strength from the preceding diarrhæa ;

fo

so that *Peruvian bark*, with *opiates* and frequent nourishment, seem most likely to afford relief, where that is in the power of medicine; but unfortunately, the state of the patient is generally at this time such, for the reasons already given, as excludes all human assistance.

Where the stools are excessively putrid, it might be worth while to try the effects of fluids which contain a large quantity of fixed air, given in clysters, as they have been found powerfully to resist putrefaction, agreeable to some late hints in Dr. Priestly's curious tract on the method of impregnating water with fixed air.

Elizabeth Tomkins, also died of this fever, the 15th of *January*, 1770.

CASE V.

Mary Evans, aged twenty-nine, was delivered *February* the 5th, 1770, without any uncommon circumstance attending her labor, which was easy and natural.

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Her habit of body was apparently good, but being crooked and narrow-chested, she was subject to habitual difficulty of breathing. She took an anodyne draught, with sperm. ceti, and passed a good night after delivery.

February the 6th. Perspired gently, and was free from pain and fever.

7th. At seven in the morning attacked with a slight shivering fit which lasted about fifteen minutes, but was not succeeded by any violent degree of feverish heat; she took the antimonial powders every three or four hours, and fell into a gentle perspiration, which seemed to relieve her; an emollient clyster was also directed.

8th. Rested the preceding night, and continued tolerably easy; she had one bilious stool in the morning, was weak and languid, but free from pain and got some sleep.

9th.

9th. At nine in the morning had a shivering fit, which was relieved by drinking warm fluids and the application of hot flannels to her extremities and sides; in a few hours the cold fit in a slight degree returned, and was succeeded by fever, and partial sweats on her breast and temples; she had some rest the former part of the night, but at two o'clock was waked by violent *gripings* and *tormina* in the bowels, followed by nine or ten bilious stools, after which she had ease.

10th. About twelve at noon was seized with great difficulty of breathing, and in the time of inspiration, affected with intolerable acute pain striking down from her breast to the navel; but there was no tension or pain in the belly, nor any symptom that could strictly be called uterine, the *lochia being neither foetid or deficient in quantity*: her pulse at the same time was quick, and unequal; but considering her great difficulty of breathing, six ounces of blood were

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were taken away, and the following mixture was given occasionally; a broth clyster with gr. xx. of thebaic tincture, was also directed, and she took rice-water or decoct. alb. for common drink.

R.

Lact. Ammoniac. ℥ vii.

Sperm. Ceti solut. ℥ ii.

Elix. paregoric. ℥ iii.

Fiat Mistura cujus sumat Cochleari a duo subinde urgente dolore vel dyspnœa.

After bleeding, her pulse became somewhat stronger, and its strokes were more distinct and free; the pain and difficulty of breathing were a little abated, and she passed a tolerable good night with refreshing slumbers.

11th. In the morning she was weak, but free from pain or much fever, and breathed with considerable ease; about three in the afternoon, she became feverish again; and in the evening, her pulse was quick and almost imperceptibly weak;

her

her limbs were cold, and partial, clammy sweats overspread her face and temples.

I directed two spoonful of the following mixture to be given every two or three hours :

R :

Spec. e. Scord. c. cum Opio ʒi

Aq. Cin. simp. ʒ vi

—*Nucis Moschat. ʒ i*

Syr. e Cort. aurant. ʒ ss fiat Mistura.

An anodyne clyster was directed as before : her extremities were kept warm with hot flannels, and she passed a restless night, being delirious by turns. At four in the morning, she had four black, foetid stools, which were voided without pain. At seven, she was perfectly sensible, and so continued 'till the hour of ten, at which time she calmly expired, being the fifth day from the febrile commencement.

The lochial discharge was natural, and she had milk at the usual time, which left her soon after the febrile attack.

DISSECTION.

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DISSECTION.

After making an incision into the abdomen, from the navel to each anterior angle of the os ilium, and turning down the muscular flap over the pubes; several ounces of *white, curd-like pus* covered the surface of the intestines; it did not run out when the abdominal cavity was laid open, being of a much thicker consistence than common matter. On further examination, I found the greatest part of the *omentum* melted down, and formed this *purulent concrete*; and that the small portion remaining, was much inflamed, and slightly adhered to the intestines. About a pint and a half of putrid fluid, like whey, was found in the cavity of the pelvis, mixed with concremented matter, and bits of black, grumous blood which seemed to have escaped from the eroded vessels of the *omentum*.

The

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The *uterus* was contracted to the size of a swan's egg, and shrunk down below the brim of the pelvis: On cutting into its cavity, small flaky pieces of the false chorion were found adhering to its surface, but it did not contain any kind of fluid; in short, this part, as well as the bladder, was perfectly sound, and without the least mark of inflammation, or any other morbid affection.

The substance of the *liver* was also found, but appeared pale, bloodless, and as if it had been par-boiled; the gall-bladder was full of blackish bile.

The *stomach* and *intestines* were in their natural state; the first contained half a pint of a watery blackish fluid, which smelled like rancid bile; and in the last was found twice that quantity of dark green fluid, somewhat like that in the stomach.

The *spleen* was large but sound.

The

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The sternum being raised, the lungs appeared of a livid hue, but on cutting into their substance, neither pus nor tubercles were found, nor any signs of inflammation; only the left lobe, at its posterior and superior part, slightly adhered to the pleura.

The veins on the neck and breast, on the left side, were enlarged to three times their natural diameter, and filled with blood of a bluish color.

REMARKS.

When respiration becomes extremely difficult and painful, in diseases of the thorax or abdomen, especially those of the inflammatory kind, nothing affords such speedy relief as bleeding; for if the breath is drawn in with excessive pain, the lungs cannot be sufficiently inflated, and therefore the blood will not be freely discharged from the heart through the pulmonary artery; hence

ON CHILD-BED FEVER. 183

hence great oppression and anxiety at the præcordia, so often complained of by the patient, which if not speedily removed, may produce a mortal suffocation; but when *matter* is already unluckily formed, as in the preceding case, it will then plainly appear, that the patient is past the assistance of art, and that neither bleeding or any thing else can avail.

As this disease is principally seated in the *omentum*, and uniformly produces inflammation of that part (*epiploitis*) I think it will strongly enforce a necessity for the early loss of blood, together with the immediate application of *blisters* to the sides, or even to the umbilical region, to prevent, if possible, a morbid affection of the viscera, which when once begun, is rapid in its progress, and generally fatal in the conclusion.

CASE VI.

Ann Hewatson, aged twenty-six, and of a delicate habit, was delivered *February* the
5th,

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5th, 1770. Her case was somewhat laborious, and the child's birth succeeded by a discharge of grumous blood from the uterus; the *placenta* came away without assistance, about an hour after delivery; she was easy in the night, and had refreshing sleep.

6th. Being inclined to sleep, took a sperm. ceti emulsion without any opiate; perspired gently, had a good night with natural rest, and waked free from pain or fever. The lochial discharge was large in quantity and foetid; but the belly was soft, and without pain.

7th. Continued easy, and had a moderate secretion of milk.

8th. About ten in the morning, after a breakfast of tea, without any evident cause, she was suddenly attacked with *rigor*, which shook her whole body like an ague fit; the shivering lasted above half an hour, gradually becoming less and less intense from its onset.

She

ON CHILD-BED FEVER. 185

She took the emetic draught already mentioned, which operated mildly towards evening, the antimonial powders were given by due intervals: she was extremely feverish, thirsty, and restless at night, but somewhat relieved by a free perspiration, which came on about twelve o'clock.

9th. Had four bilious, frothy stools, preceded by violent pains and gripings in the bowels: an emollient clyster was injected. Her pulse was quick and weak, and the febrile symptoms violent. She had a very restless night, but only one evacuation and without pain.

10th. In the morning had nine or ten blackish stools, mixed with mucus, which were extremely offensive, and attended with great pain: her pulse was excessive quick, she breathed laboriously, as it were by jerks, and complained of great oppression across her breast and stomach, and of pain striking down under her shoulder-blade, when she drew in her breath. Eight ounces

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of blood were taken away, and a starch clyster with gr. xxx of tinct. thebaic. was administered: she only now took rice-water, with a small portion of brandy in it, as every thing else purged her immoderately. Towards evening, seemed better, her pulse not so frequent, the pain and feverish symptoms were somewhat abated.

11th. Hot and restless, with faint sweats on her breast, neck, and face. Emollient clyster repeated, without the opiate; after which she had some sleep.

12th. The clyster came away with a bilious stool; she was manifestly much worse, her pulse being very quick, and thirst intense; she breathed laboriously, had a fixed crimson color in her cheeks, and was also much troubled with a cough and viscid phlegm, which she was unable to expectorate, but found relief by taking the following mixture:

R. Sal.

ON CHILD-BED FEVER. 187

R. Sal. Absinth. ʒ i.
Succ. Limon. ʒ iss, peracta effervescencia,
affund.

Aq. Hyssop. ʒ vi

Elix. paregoric ʒ ii

Syr. balsamic. ʒ iii

Fiat Mistura, cujus sumat Cochlearia duo
subinde pro re nata.

13th. She was supported by a cordial
 julep when faint, with light nourishment,
 and wine given by spoonfuls.

14th. Breathed with great difficulty,
 her pulse very quick and weak. She had
 partial sweats on her stomach, breast, and
 face, attended with coldness of the extre-
 mities, great langour, and all the symp-
 toms of approaching death: she died about
 two in the morning, being the eighth day
 after the attack.

REMARKS.

At the time of the shivering fit, which
 happened on the third day; this patient

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had plenty of milk in her breasts, which afterwards suddenly disappeared, and was totally gone off in the evening; her breasts being then loose and empty: *the defect of milk is therefore manifestly a consequence of the morbid cause.*

There is however one circumstance, which, although it seems to controvert this opinion, I cannot help mentioning, viz. those who were seized with this fever, were not subject to abscesses of the breasts; and of those who happened to have such abscesses, I have never known one die; neither are they subject to diarrhoea, or much symptomatic fever, although the pain attending a suppuration of the breast, is often very acute.

The putrid discharge of *lochia* in this case, appears merely accidental, and only owing to a corruption of coagulated blood retained in the uterus, from the access of air, like that which came away soon after delivery.

Phæbe

ON CHILD-BED FEVER. 189

Phoebe Hill, aged nineteen, was also violently seized with this fever on the eleventh of *February*, and contrary to my expectation, recovered, and was discharged in perfect health, on the 3d of *March*.

She was *blooded early and liberally*, and treated much like the former patient, but I did not take minutes of her case.

C A S E. VII.

Elizabeth Gardner, aged thirty-two, was delivered in the Hospital the 11th of *February*, 1770; her labor was natural, and her habit of body strong and healthy, although she had been troubled with a violent cough for several weeks before delivery.

12th. Her pulse was full and frequent, attended with great thirst, sickness at stomach, and pain in her head and bowels; she took saline mixture, with sperm. ceti, and an emollient clyster was administered: She also drank plentifully of

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weak tea and barley-water, but did not perspire, and passed the night without sleep.

I visited this patient with Dr. Ford. Her pulse being exceeding quick, and more full and strong than usual, attended with excessive thirst, a violent head-ach and dry skin; we directed ten ounces of blood immediately to be taken away: A lenitive electuary was afterwards given, and an emollient clyster, which produced two or three lax motions: She diluted plentifully, but did not perspire, and passed a restless night.

The secretion of *milk* was moderate, and the *lochia* discharge natural.

14th. In the morning had some refreshing sleep, with gentle perspiration; thirst and fever somewhat abated: She had three evacuations by stool, but still complained much of intolerable shooting pain in her head, especially at the time

ON CHILD BED FEVER. 191

of coughing: Eight ounces more blood were taken away, which was not near so fizy as that first drawn.

15th. Much disturbed by her cough in the night, perspired little, and had no sleep, though her head-ach was somewhat better.

16th. In the evening, her pulse was extremely quick, thirst immoderate, and all the febrile symptoms increased: she was sick at stomach, and had three bilious stools, with severe gripings in her bowels. The *antimonial powders* were given every three or four hours; about two hours after taking the second, she threw up a large quantity of viscid phlegm, mixed with bile, and in the night had eight or nine black stools, the last very foetid, and mixed with blood and mucus. She was delirious by turns, very restless, and had partial, faint sweats on her breast and face.



The

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The vitel. ovi, with mucilage of starch, was dissolved in rice-water, and injected as a clyster; and she took the following draught,

R.

Sperm. Ceti. Solut. 3fs

Pulv. e Tragacanth. C. Di

Aq. Cin. Simp. 3ifs

Tinct. Thebaic. gtt. xv.

Syr. e. Mitcon. 3i fiat haustus.

17th. Her stomach and bowels were much relieved, she slept in the night and waked refreshed; her pulse was weak but equal, and she perspired moderately.

18th. Better in all respects, but complained of great soreness in her bowels at the time of coughing: She took the anodyne draught at night, and the starch clysters were continued with light nourishment.

19th. ~~Weak,~~ but continued easy, her pulse regular, and she perspired gently. Instead of medicines, she now took calf's-foot

ON CHILD-BED FEVER. 193

foot-jelly, and nourishing broth, to repair her strength.

20th. From this time gradually continued to recover, and the 9th of *March*, she was discharged from the hospital in perfect health.

Ann Williams, who was delivered in the hospital on the 14th of February, was seized with this fever, and recovered under the like treatment.

Elizabeth Cousenitt, of a sickly, consumptive habit, also had the fever the 23d of February, and died the 3d of *March*: There was no secretion of *milk*, but the lochial discharge was natural. She was treated in the usual manner, but not blooded.

CASE VIII.

Ann Simms, aged twenty-two, apparently healthy and strong, was delivered on *Tuesday* the 6th of *March*; her case was somewhat laborious, the child's head being

being large, and detained several hours within the bones of the pelvis : An emollient clyster was directed in the evening, and she took an anodyne draught ; passed a restless night, and without the least perspiration.

7th. Feverish and thirsty, pulse quick and somewhat full, and her skin dry. She took the saline mixture, and diluted plentifully with nitrous drink ; a clyster of beef-water was given in the evening ; had a very indifferent night, and little rest.

8th. A little better ; she had milk in her breasts, and being costive, complained of head-ach. A cathartic clyster was administered in the evening, which procured two evacuations, and her head was easier.

9th and 10th. Somewhat feverish, and restless, though free from pain.

11th. Continued very restless ; the pulse was quick, her tongue white and dry, and her thirst intense, without any perspiration:

ON CHILD BED FEVER. 124

spiration : At night, she took a saline draught, with ten grains of *nitre* and gr. xv. of *thebaic tincture*, but had scarcely any rest.

12th and 13th. The febrile symptoms continued, and though she diluted plentifully, her skin remained parched and dry. Six grains of *James's Powder* were then administered, which puked her twice, and afterwards procured her three motions : At night I directed her another powder and an emollient clyster, with gr. xxx. of *thebaic tincture* : She had some sleep in the night, but no free perspiration.

14th. In the morning apparently better, and disposed to sleep, but towards evening, was sick at stomach, and threw up a large quantity of bitter, glairy fluid ; in the night she was seized with severe pains in her bowels, followed by seven or eight bilious stools, and afterwards had some sleep.

15th.

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15th. Her pulse quick, skin dry, and her hands tremulous; her looks were wild and staring, and her cheeks beset with a deep crimson hue, she breathed laboriously, and complained of great pain in her side, and belly towards the navel: At night she had six black, watery stools; after which an anodyne draught and a starch clyster were directed: She seemed relieved, and slept for several hours.

16th. The pain in her belly and side was but little abated; she was extremely hot and restless, and could not sweat; I directed three spoonful of the following mixture to be given, which produced no perspiration although she took it every two or three hours:

R.

Sal. Volat. Ammon. ʒ i

Succ. Limon. recent. express. ʒ iss *misce*

Aq. Alex. simp. ʒ vi

Tinct. Croci ʒ iii

Syr. ejusd. ʒ ss *fiat Mistura.*

17th.

17th. Much worse, in all respects; the pulse being exceedingly quick, and almost imperceptibly weak; cold, clammy sweats overspread her breast and face, which became now pale and death-like, and about twelve at noon she expired.

The *lochia* were discharged in natural quantity, and she had milk in the breasts till within a day or two of her death.

DISSECTION.

When the body was opened, the next day in the evening; the inferior lateral portion of the *omentum* was found much inflamed, its vessels being turgid, and as it were injected with blood, but the greater part of it was destroyed by *suppuration*; what remained, adhered to the small intestines; which were also slightly cemented to each other, where their convolutions came in contact.

The

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The *uterus* was contracted to the size of a large fist, and lay at the bottom of the pelvis; the *fundus uteri* seemed to partake of the general inflammation which had apparently first affected the *omentum*, and afterwards superficially overspread the *intestines*, *mesentery* and contiguous parts; but on cutting into its substance, it was perfectly firm and sound, although it had a livid appearance towards the cervix and os internum, which might probably be owing to the violence sustained by those parts in the time of labor.

In the cavity of the pelvis was found above a pint of *Whey-colored fluid*, with three or four ounces of *thick matter*, which did not uniformly mix with it, but floated in it like curds in whey, together with several bits of black, coagulated blood.

The *liver* was found, but remarkably pale, and the gall-bladder turgid with a large quantity of *olive-colored bile*; in consistence, equal to that of honey, and with difficulty,

difficulty, squeezed through the cystic duct. The stomach contained about half a pint of black, oily liquor, resembling that which was voided by stool.

The contents of the *thorax* were found and without any morbid appearance; except a slight adhesion of the right lobe of the lungs to the pleura.

C A S E IX.

Ann Cook, aged twenty, of a delicate habit, after easy labor was delivered in the hospital: the 13th of *March*, 1770.

The same evening she complained of sickness at stomach, with pain in her bowels, and passed a restless night.

14th. Continued sick at stomach; took the *antimonial emetic draught*, and threw up a large quantity of bilious, ropy fluid from the stomach; also had one lax stool; after which, a broth clyster was injected with

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with thirty drops of *thebaic tincture*. She passed a tolerable night, perspired moderately, and had some refreshing sleep.

15th. Free from pain in the bowels, and had a good night's rest.

16th. Sick at stomach, and vomited a quantity of poraceous fluid; her pulse was quick, and her thirst excessive: She took the *antimonial powders* every four or five hours, but perspired little, and had a restless night.

17th. In the morning complained of great sickness, and burning heat at stomach with violent head-ach; and threw up near a tea-cupful of dark green liquor, which seemed to be almost *pure bile*: She had also five bilious motions.

At night suddenly seized with acute pain in her side, and great oppression at her breast; being likewise almost suffocated with tough phlegm, which she could not bring up: Her pulse was exceeding quick and somewhat weak, and her countenance ghastly; but

but as she breathed with vast difficulty, I directed seven ounces of blood to be taken away, and that she should draw in the steams of warm water into her lungs at each inspiration: She afterwards took one of the antimonial powders, which occasioned her to vomit twice, and gave her two motions. She was exceeding weak, but breathed with more freedom and ease; An emollient, anodyne clyster was injected, and she was ordered a spoonful or two of warm spiced wine when faint.

18th. In the morning she breathed with more ease, and was free from the load at her breast: her pulse beat regularly, but was extremely languid: Bladders with hot water wrapped in flannels, were applied to the soles of her feet; she took light nourishment often, and now and then a spoonful of spiced wine.

19th. Had refreshing slumbers the preceding night, and gained strength: nothing was now given but frequent nourishment.

20th. Continued better; directed the following draught to be taken twice a-day, which greatly increased her strength:

Revised and reissued 1954

Infus. Peruv. Cort. 3 iſs

Aq. Cin. Spt. 3 iii

Spt. Lavend. c. gtu. rar. nov. 18. 1811

Confect. Alkerm. 3i fiat haustus.

In about a week's time she was much recovered, and went out of the hospital the 2d of April in perfect health.

CASE X.

Philadelphia Ford, aged twenty-eight, was delivered the 14th of *March*, 1770, and well till the third day, when she complained of great pain in her head, with lassitude and inability to turn in bed: Her countenance was florid; had a brown dry crust on her tongue, and unquenchable thirst: Her appetite left her, and there was not milk enough to give suck. The medicines usually administered on such occasions

ON CHILD-BED FEVER. 203

caſions had but little effect; but all the febrile ſymptoms were much relieved by the appearance of a red cutaneous ſwelling on the joint of her great toe: In a few days, another ſwelling of a livid color appeared below her hip; they were poulticed and fomented, but did not ſuppurate; the laſt threw off a black mortified flough, and diſcharged ſanious ichor. I directed her a ſtrong infuſion of *bark*, with *tinct. aromat.* and by allowing her wine and good nourishment, ſhe recovered.

Ann Deuſe, of a thin, weakly habit, died of this fever, notwithstanding various remedies were tried for her relief: She had a natural labor, and remained well for the firſt three days; inadvertently ſhe fat up on the fourth day, and found herſelf not well towards evening: On the fifth, was ſeized with a *ſhivering fit*; the next day complained of pain in her belly and ſide; and on the 29th of *March* ſhe died, being the ſixth day after the attack.

O 2

She

She had milk in her breasts, and the *lochia* discharge was natural.

Bleeding in this case was not thought eligible. I have not known any instance besides this, where the disease proved fatal in so short a time, when it commenced so late after delivery, being in general, then most favorable.

The body being opened, almost exactly the same morbid appearances presented as in the preceding cases; the *omentum* was destroyed, and a large quantity of *matter*, and *purulent serum*, collected in the *abdomen*. The *intestines* were superficially inflamed, but the *uterus* and all the other *viscera* were perfectly sound.

Rebecca Day, of a healthy, robust habit, after a natural delivery, was seized with the head-ach and sickness at stomach; two days after, a *miliary eruption* appeared on her breast and body, but without relief; for all the febrile symptoms gradually increased,

creased, and she died the 25th of *April*, being the tenth day after delivery.

The *lochial discharge* was not defective, neither was there want of milk, till after the febrile attack.

The body was opened, but as the appearance of the *affected parts* was much the same, and only differed in degree from those already mentioned; a recital of particulars would be unnecessary.

C A S E XI.

Harriot Trueman, young and of a strong, healthy constitution, May the 2d, was delivered of a *monstrous child*, which presented with the arm; so that the case was preternatural in a double sense.

As this patient was of a plethoric habit, and subject to cough, I directed seven ounces of blood to be taken away, before the delivery was attempted; to prevent in some measure, the danger of inflammation, which might arise from the violence applied in turning the child.

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After delivery, an emollient clyster was directed, and a saline mixture with sperm, ceti and syr. e mecon. of which she was to take three spoonful every four or five hours, as occasion required; she was free from pain, and had a good night.

3d. Perspired gently, continued free from pain and fever, her cough less violent, and she passed her water with ease; the mixture was continued, and a clyster as before, given in the evening: she remained easy during the night, and rested well.

4th. Continued perfectly easy, and passed a good night: the *lochia* discharge was natural, and she had no pain in the region of the uterus.

5th. About three in the afternoon, was seized with difficulty of breathing, and oppression across her breast and stomach; seven ounces of blood were immediately taken away, which was exceeding fizy. The strokes of her pulse were weak, quick, and

and indistinct after bleeding, but soon became less frequent, and more ample and strong; she found herself much relieved, and could then breath with freedom; was disposed to gentle perspiration, and refreshing slumbers in the night; the mixture and emollient clyster were repeated.

The secretion of *milk* was moderate.

6th. She continued easy, had a natural evacuation by stool, and slept by intervals.

7th. At four in the morning, her difficulty of breathing and cough returned; she was sick at stomach, vomited up a ropy, bilious fluid, and had five *black stools*. Her pulse was weak, frequent and intermitting; her breasts subsided, and the milk suddenly disappeared.

I directed a powder, with the third part of a grain of the *tartar emetic*, and a scruple of the *pulv. Contrayer. c.* to be repeated every four or five hours after, if the first had no sensible operation by sweat or vomiting, and also an emollient clyster.

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She passed a restless night without perspiration, her belly began to swell, and she had several involuntary bilious stools.

8th. Respiration was frequent and laborious, pulse quick and weak, her skin dry, and she complained much of pains in her sides, and across her belly near the navel, at the time of drawing her breath.

I directed a fomentation to her belly and sides, the powders to be repeated, and a starch clyster to be injected in the evening, with gr. xxx of the *tinct. thebaic.*

She took rice water with a small quantity of brandy, for common drink, and a spoonful of spiced wine when faint.

The involuntary purging still continued violent, and she had no rest.

9th. Complained of pains in her breast and belly, the difficulty of breathing increased, her pulse was quick and almost imperceptibly weak; she was delirious by turns; had cold clammy sweats on her neck and face, and about four the next morning, she expired.

DISSECTION.

DISSECTION.

When the body was opened, the greatest part of the *omentum* was suppurated, and converted into *thick matter*; the remaining portion, being much inflamed and slightly adhering to the folds of the *intestines*. The cavity of the *pelvis* and *abdomen*, contained about three pints of *putrid serum*, with clots of concremented pus, and small pieces of coagulated blood.

The *uterus* was much contracted, and shrunk down to the inferior part of the *pelvis*; its substance was sound, tho the *os tincæ* was somewhat livid, which appearance not being considered as morbid, has already been taken notice of.

Scarcely any marks of inflammation appeared on the *intestines* or *mesentery*; the *liver* was apparently sound, and the *gall-bladder* full of *yellow bile*, which had pervaded its coats, and dyed the contiguous parts

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parts of a saffron-hue ; but this I did not look upon as a morbid appearance.

The *stomach* contained a pint of *blackish fluid*, like that voided by stool, and which had the appearance of putrid bile.

On raising the sternum, two ounces or more of *matter* was lodged upon the *mediastinum* ; and the *thorax* contained a small quantity of the same kind of whey-colored fluid as that found in the abdomen : The *lungs* were apparently sound, only the left lobe adhered slightly to the pleura, at its posterior part,

REMARKS.

The extravasion of purulent fluid in the abdomen, by hindering the free play of the diaphragm, will, in a great measure, account for the difficulty of breathing ; particularly as the lungs were still further oppressed by the same kind of fluid in the thorax.

As

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As the blackish fluid found in the stomach resembled putrid bile; I mixed a small quantity of it with vinegar, but could not perceive any effervescence, neither did the vinegar change it green; but this perhaps might be owing to the natural properties of the bile being altered by putrefaction.

Hippocrates, in his Aphorisms, takes notice, that *black excrements*, resembling black blood, are to be looked upon as a bad omen; and that *black bile* rejected either upwards or downwards at the beginning of a disease, is a *mortal sign*; which observation is verified by repeated experience in the advanced state of diseases, as well as at their beginning.*

The color of the excrements passing through the alimentary tube, principally depends upon the quantity and quality of *bile*; thus, where there is a defect of it, the stools are pale, and the body costive, and

* *Hippocrat.* Aphorism. Sect. quart. Aphor. 21 et 22.

and on the contrary, when it abounds, they are yellow or greenish, and generally frequent.

Black, foetid stools, such as were observed towards the end of *Child-bed Fever*, almost certainly denote *internal mortification*, and therefore, it is no wonder they were so often followed by a fatal conclusion; but such a mortification cannot affect the color of the excrements, except by means of the bile, which after absorption of the corrupted fluids into the blood, will at last become putrid, black, and acrimonious.

There was something very singular in this woman's child, which was *monstrous*: It had no thumbs; the parietal bones were wanting; and not above two ounces of brain was found in the cavity of the skull: The upper part of the scalp adhered strongly to the internal surface of the *placenta*, so that when the child was extracted, this part was pulled along with it, though
luckily

luckily, it was not attended with any degree of flooding.

Elizabeth Pool, young, and of a healthy constitution, was delivered the 15th of *May*, and soon after affected with the symptoms of this fever, but in a degree less acute than usual: Her case was much like that of *Elizabeth Waters*; for though she laboured under a slow, lingering fever for a long time, her appetite remained.

She was deprived of the use of her limbs for several days, yet the severe pains of which she complained, were not, like those of the former, followed by abscesses in the muscular parts.

On the 16th of *June* she was sufficiently recovered to go out of the Hospital.

About this time, as near as I can recollect, I was called to a gentlewoman at *Clapham*, who was seized with this fever; and notwithstanding she had been very properly treated by her apothecary, and took every thing

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thing that could be devised for her safety, she died about the tenth day after the attack.

CASE XII.

Mrs. P—, a lady in *Holborn*, aged twenty-eight, and of a delicate habit of body, was delivered by her midwife on *Saturday* morning the 7th of July, 1770.

The birth was not attended with any dangerous or uncommon circumstance; she was easy after delivery, and rested well at night.

8th. Towards evening, complained of head-ach, but had several hours sleep the following night.

9th. Waked in the morning with *acute pain* in her right side, her head-ach was worse, and about three in the afternoon, she had a violent *shivering fit*, with coldness of the extremities, and great internal heat across her breast and stomach: I found her pulse exceeding quick, her head-ach violent, her tongue white and dry, and the
pain

pain in her side extremely acute and deep seated; she breathed laboriously, and had no perspiration, except on the breast and face.

I directed eight ounces of blood to be taken away, and one of the *antimonial powders* to be given, which was to be repeated every two or three hours, if the first had no effect. An emollient clyster was administered, and bladders of warm water were applied to the soles of her feet and sides; She passed a restless night, without any abatement of pain or difficulty of breathing.

Two of the powders were taken, the first created nausea, but did not prove emetic, nor produce any considerable perspiration.

The blood was not so fizy as I expected. 10th. The pulse being full, hard, and frequent, her skin dry, and respiration difficult and painful; eight ounces more blood were drawn; the powders were repeated every

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every four or five hours, and a *blister* was applied to the affected side in the evening: She drank plentifully of common emulsion with *nitre*, to prevent strangury, and relieve her difficulty of making water, which had been troublesome from the beginning

11th. Had no sleep the preceding night; and as the pain in her head and difficulty of breathing still increased, she was again bled in the night, to the quantity of six ounces, as I had previously directed, in case the symptoms became urgent.

She was much relieved soon after this last bleeding; the pain abated; she could then breathe with more freedom, her pulse became more soft and less frequent, and a free and equal perspiration broke out all over her body.

At this time she began to be troubled with a cough, and was much oppressed with white, viscid phlegm, which was expectorated with great difficulty; she had

two

two motions with a large discharge of fœces, which came away with the second clyster.

The last drawn blood was uncommonly fizy, and the *gelatinous crust* on its surface extremely thick and tenacious.

She had milk in her breasts, which were drawn twice a-day, and the *lochial discharge* was natural.

As she perspired freely, the powders were discontinued, and the *saline draughts*, with *oxymel scillit.* given every five or six hours.

The blister rose well ; the emulsion was continued, and the emollient clyster ordered to be repeated as before.

About nine at night all her feverish symptoms returned ; her pulse was exceeding quick, skin dry, her thirst intolerable, and the pain in her side, and difficulty of breathing were so violent, that her *apothecary* was called up in the night, and took away six ounces more blood : One of the

P

antimonial

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antimonial powders was also given, after which she again began to perspire, with an abatement of all the feverish symptoms, and had two or three hours refreshing sleep.

12th. Something better; but in the evening was attacked with a deep-seated violent pain in her other side, between the breast and axilla, so as almost to prevent her from breathing; her cough was troublesome, and she expectorated with much difficulty; four ounces more blood were drawn, and the following draught prescribed:

R

Sal. Volat. ammon. gr. xv

Succ. Limon. ℥ iii

Aq. alex. simp. ℥ i

---Spt. cum Acet. ℥ ii

Tinct. Thebaic. gtt. xii

Syr. c. Mecon. ℥ i

Misce & fiat haustus vesperi exhibendus.

She drank plentifully of thin diluting liquors with *nitre*; the clyster was repeated

as

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as before, and by intervals, she took the following mixture:

R

Sperm. Ceti solut. ʒ ii

Lact. ammon. ʒ vii

Elix. Paregoric. ʒ iii fiat *mistura.*

Had an exceeding bad night, but slumbered a little at times.

13th. Apparently better, but complained of severe rheumatic pains about her back and loins: Her cough was more and more troublesome, and greatly interrupted her rest, but was relieved by the mixture with *gum ammoniacum*, to which a small quantity of *oxymel Scillit.* was added.

White wine whey was ordered to be given her in the night to support her strength, and she took a decoct. of bread with currant jelly for nourishment.

14th. Had two or three hours refreshing sleep the preceding night, and the feverish symptoms were somewhat abated; but as there was not yet the least sediment or se-

paration in her urine, which was high-colored, I still referred the use of *bark*, and directed the anodyne draught at night as before, which always eased her cough, and procured sleep.

15th. Being *Sunday*, about two in the morning, her relations thought her in great danger, and particularly requested me to see her, which I did accordingly : Her pulse was quick and tremulous, her extremities cold, and her face and breasts were bedewed with a clammy sweat. She breathed laboriously, with convulsive jerks, and complained of great weight and oppression across her breast : though perfectly sensible, she had a wild, eager countenance, a trembling hand, and apparently all the symptoms of approaching death.

I gave her four spoonfuls of a strong cordial julep, ordered sinapisms to her feet ; her extremities were rubbed with hot flannels ; and cloths dipped in brandy were applied to her stomach.

A

ON CHILD-BED FEVER. 221

A few hours after I was gone, she revived, but grew restless and almost frantic, insisting upon cold water to drink, which was given her: The next day I was acquainted she was still alive; when I visited her about one in the afternoon, she was perfectly sensible, but so weak and languid that she was scarcely able to speak.

I directed a cordial julep to be given when faint, and the following draught with *bark*, to be taken every two hours, or as often as her stomach would bear; but as she had several involuntary motions, I ordered five grains of the *pil. e styrace* to be instantly given, which restrained the looseness, and procured some hours sleep, before the bark could be prepared.

R

Decoct. Peruv. Cort. ʒ iss

Pulv. subtiliss. ejusd. ʒ ss

Aq. Cinn. Spt. ʒ iii

Syr. e Mecon. ʒ i

fiat haustus alternis horis exhibendus.

P 3

By

By eleven o'clock at night, she had taken four draughts, and had very little return of fever ; but as her skin was dry and thirst intense, I allowed her to drink plentifully of toast and water, which she particularly desired, and swallowed with great eagerness ; after which, she gently perspired towards the morning, and growing cooler began the draughts as before. The urine was amber colored, but without sediment or separation.

16th. Better in all respects, but very weak, and her rest much disturbed in the night by the cough : Draughts continued as before, and by intervals wine and light nourishment were given often, and in small quantities.

17th. Continued free from fever, and able to sit up ; she had three stools, was much disturbed by her cough, and complained of a sore throat.

Directed

Directed *pil. e syracc* three grains, and the draughts only to be given three times a-day.

There was no remarkable change 'till the 21st. at which time she was almost unable to swallow, her throat being much worse, and the tonsil glands slightly ulcerated; her cough was troublesome, and several *miliary eruptions* appeared in her body.

The following draught was given every four or five hours, and her throat was fumigated with the steams of hot vinegar poured on lavender flowers, which gave her great relief.

R

Decoct. Cort. Peruv. ʒ iſs

Extract. ejusd. moll. ʒ i

Elix. Vitriol. dulc. gn. xx.

Aq. Cin. Spt. ʒ iii

Confect. Alkerm. ʒ i. *misce & fiat haustus.*

Her strength was supported by nourishment of easy digestion as often as her sto-

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mach would dispense with it, and a little spiced claret was given whenever she pleased.

23d. I desired she might be removed into the country (*Clapham*) for the benefit of air; and in a few days she was so much better in all respects, as to leave off her medicines, and only took a tincture of *bark*, and *cardamoms* as a stomachic, in a strong infusion of *tansy*.

R E M A R K S.

This fever was complicated with the *pleurisy* in a high degree; a case, of all others the most dangerous; and as pleuritic symptoms do sometimes accompany a morbid affection of the *abdominal viscera* in this disease; perhaps it might reasonably be asked, whether the *diarrhæa* and *inflammation of the omentum*, which so usually succeeded the *rigor*, were not here prevented by *early and repeated bleeding*?

From

From what may be observed in the foregoing history; *it does not appear eligible to wait for a distinct intermission of this fever, lest a severe attack of the febrile paroxysm should in the mean time carry off the patient*: I think a remission of the symptoms, especially if attended with any critical evacuation, is, in general, sufficient to justify the liberal and immediate use of the *bark*; but where they are at first manifestly inflammatory, when bleeding and evacuations had not preceded; I have seen it given without any good effect.

C A S E. XIII.

Sarah Evans, about twenty-one years of age, was delivered in the Hospital on *Monday* the 19th of *November*, 1770; she had a natural labor, and was well the two first days after delivery; but on the third day seized with fever, which the *matron* believed was owing to a surprize, as the febrile symptoms appeared very soon after.

As

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As this patient was of a very delicate irritable habit, and lax fibres, I did not think it proper to direct bleeding, particularly as her skin was moist, and her pulse quick and weak.

She took a mixture with *spt. mindereri* and the *inf. thebaic*; emollient clysters were also directed to be frequently administered. After the fever had gradually increased for a few days, she complained of difficulty of breathing, and pain in the side of her belly, towards the navel. Warm flannels were applied to the part affected, and bladders of hot water to her feet.

She drank beef water, and weak pimento tea for common drink; and being extremely languid, was allowed a small quantity of white wine and light nourishment by turns.

On the 29th of *November* she was still weaker; the heart almost ceasing to do its office, and the circulation being at the lowest ebb. The next morning she calmly expired

expired without any signs of mortal anguish.

DISSECTION.

On opening the body, evident marks of inflammation appeared, particularly in the *abdomen* : Great part of the *omentum* was destroyed, and converted into *matter*, what remained was become *gangrenous* ; its diseased membranous expansions here and there overspread the *intestines*, and slightly adhered to their surface, which was also inflamed, particularly at their convolutions ; those parts, from the additional effect of pressure, being as it were superficially foldered together : That portion of the *omentum* which is inserted round the great curvature of the stomach, was also considerably inflamed.

The *uterus* had a natural appearance, and was perfectly sound, as well as all the parts peculiar to it.

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The *liver* was also unaffected, except its peritonæal coat, which being dissolved by the inflammation, lay on its surface in a tender, gelatinous state. The *gall-bladder* was turgid with *bile*.

The *mediastinum* was inflamed, but the *lungs* were perfectly sound, and free from adhesion to the pleura.

The *whew-colored, putrid fluid* contained in the cavity of the abdomen, was nearly the same in quantity and appearance as that in the former cases.

Where the pulse was extremely soft and weak, and the circulation languid; it is difficult to account for so sudden and high a degree of inflammation, as to produce a collection of *matter*, or any inflammatory affection of the abdominal viscera; but so it was; and therefore, in all such cases, where bleeding seems improper, it will be requisite, immediately to apply *sinapisms*, or a *large blister* to the *umbilical region*.

CASE.

C A S E XIV.

Hannah Jeffreys, of a strong, healthy constitution ; the fourth day after delivery, which was natural, was seized with a *shivering fit*, succeeded by head-ach, and great sickness at stomach, with six bilious stools; she was affected with universal languor, and dejection of spirits, was very restless, and had a smart, quick pulse.

A clyster with beef-water was given, and she diluted plentifully with warm balm-tea, but did not perspire.

The next morning, she had two purgative evacuations, and labored under much anxiety and oppression at her breast : Broad, *purple colored spots* which rose a little above the surface of her skin, soon after appeared all over her body, they were very thick on her breast and face, but not attended with any mitigation of the symptoms, except for an hour or two in the beginning.

She took one of the *antimonial powders*, which was repeated every three or four hours

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hours, without any sensible evacuation whatever : As she was no better in the evening, the eruption appearing *livid*, and her extremities being cold ; a cordial julep was given her now and then ; *blisters* were applied to the inside of her arms, and *cataplasms* to her feet ; the emollient clyster was repeated, and she was allowed white-wine whey for common drink.

The two following days all the febrile symptoms increased, with the difficulty of breathing ; altho' the blisters, which had been applied, produced their proper effect ; and thus growing gradually worse and worse, she died at four in the morning, on the 5th of *May*, 1771, being the ninth day from that of her delivery.

R E M A R K S.

The causes from whence those *petechiæ* are said to happen, are so different, as to make a difference in their treatment, very essential to the patient's safety ; for instance,

instance, if they arise from putrid dissolution of the blood, they will require the use of *bark*, with *acids* ; and all such medicines as confirm its texture, and resist the putrefactive tendency prevailing in the habit ; but if, on the contrary, they are produced by too violent a degree of the circulating power, which may occasion rupture of the small arteries, and extravasation of the sanguineous globules, then the former remedies are to be avoided ; and such as diminish the action of the heart and arteries, will afford the most relief ; viz. *bleeding*, *sedatives*, and cooling regimen.

The first case is attended with exceeding danger, and very often proves fatal: Here the pulse is generally quick and weak, and the loss of strength great and sudden ; on the contrary, in the second case, the pulse is hard and full, the artery vibrates more strongly, and the *spots* may sometimes be found, by the touch, to rise a little above
the

the surface of the skin, which is usually hot and florid ; but it must be confessed, that some particular fevers are so indistinctly marked, as to their species, and their symptoms so complicated and equivocal, that it is not a little difficult to know with certainty from what causes they arise.

This last case was the only one where the *omentum* was neither suppurated, or become gangrenous ; there was indeed, some signs of slight inflammation, and a considerable quantity of fluid in the *abdomen*, which looked like the *serum* of blood ; but it was not purulent, as in the former cases. Hence it is probable, that a gradual accumulation of fluid in the *abdomen* commences before death, as the *lymphatics* lose their absorbent power, from defect of the *vis vitæ*.

We have been told, the body has sometimes been observed to remain warm for several days after death, and that the limbs, instead of becoming stiff and rigid, continue

tinue soft and flexible: This extraordinary circumstance occurred to me once or twice, and occasioned no small anxiety in the friends of the deceased, who looked upon it as a sign of some latent sparks of life, and therefore would not permit interment of the body, until long after the usual time. But in reality, such appearances are strictly *morbid*, and instead of creating hope, should totally exclude it; for they denote diseases highly putrid, and of a mortal nature. All animal bodies tend to dissolution, as soon as the progressive motion of their fluids ceases; and this preternatural heat of body seems owing to nothing but an uncommon degree of *putrefactive fermentation* which is known to generate *heat*.

The following case was drawn up by Mr. *Patten*, surgeon to the ship *Resolution* which sailed round the world, commanded by the late *Captain Cook*.

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CASE

C A S E XV.

Sibyl Watson, aged twenty-two, was delivered in the Hospital Oct. 2d, 1776, of her first child, without any uncommon circumstance attending the labor which was easy and natural : The placenta came away without any assistance, about ten minutes after delivery. She rested well in the night, and perspired gently.

This woman was of a lax and delicate constitution, and had during the two last months of pregnancy, been troubled with a slight pain in her left side attended with cough and difficulty of breathing, but these complaints had in a great measure been removed by bleeding some time before delivery.

3d. In the morning she was perfectly free from pain and fever, but about six in the evening without any apparent cause, was suddenly attacked with burning heat diffused all over her body, which was succeeded by coldness and shivering, great anxiety

ON CHILD-BED FEVER. 235

anxiety and oppression at the *præcordia*, and universal pain. For these complaints she took a few drops of the *tinctura thebaica* in a little mint water.

At nine, when I saw her, she had the following symptoms, *viz.* violent pain in the left side of the thorax, which struck down to the left groin, sometimes to the right, and frequently darted from thence to the navel. She had great soreness all over the abdomen, a frequent nausea and retching to vomit, which brought up nothing but phlegm; her breathing was short, and laborious, the pulse quick, weak, and unequal, sometimes fluttering, and at other times regular, with some small degree of hardness; her voice was weak and tremulous, her countenance pale, the skin hard and rough, without the least moisture on any part of her body, except the breast and neck; she complained at intervals of acute pain in the stomach,

Q₂

which

which continued for a short time, but frequently returned; she had also a fixed pain in the right shoulder.

Dr. *Leake* directed ten ounces of blood to be taken from the arm, which gave her immediate relief; the pulse became more regular, and the oppression about the præcordia, and difficulty of breathing, were almost totally removed. The fourth part of a grain of emetic tartar was given with the saline draught every three or four hours, and she drank plentifully of warm diluting liquors.

4th. No rest the preceding night; in the morning she had a bilious stool, her pulse was full and quick, attended with difficult respiration, and great oppression at the præcordia, with frequent sighings; her tongue was white, but moist, and she complained of universal pain and soreness all over the abdomen: The tartar emetic was continued, with large doses of camphorated julep every three hours; she diluted plentifully, but did not perspire.

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5th. Had eight bilious stools, the pain and difficulty of breathing were considerably abated, her complexion more lively, the pulse regular, differing little from a healthy state, a gentle moisture was diffused over the whole body; she had a moderate secretion of milk, and the lochia were discharged in their natural quantity. Two ounces of a strong decoction of bark were now prescribed and directed to be given every four hours; she rested well in the night, and perspired gently.

6th. Had five bilious stools without pain, and was much better in all respects. The decoction of bark was continued.

7th. Almost every complaint vanished; she was so much better, as to be able to walk about the ward without assistance, and in due time was discharged from the Hospital perfectly recovered.

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CASE

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C A S E XVI.

Sarah Davies was delivered at the Westminster Lying-In Hospital, December 4th, 1778. The lochial discharge and excretions in general were natural.

8th. The pulse full and frequent; respiration difficult. She was thirsty, had pain in her head, and as she expressed it, at her heart also. By the matron's order, balm-tea and barley water were given for common drink.

9th. She was visited by *Dr. Leake*, who prescribed the antimonial powders and bottles of warm water to her feet.

11th. Better in every respect, with abatement of thirst, perspiration moderate, the bowels laxative, and pulse not so quick.

14th. Worse, as supposed, from anxiety of mind; pulse low and frequent, the jaws strongly contracted, and breathing difficult, with pain in her bowels and loose offensive stools. *Dr. Leake* directed a blister to the side,

sides, and bolus's of *camphor, musk and opium*, which were given when they could be got into her mouth.

13th. Pulse low and quick, and stools frequent, same medicines continued.

14th. Purging more violent, attended with slow fever, thirst violent and skin dry. Visited by *Dr. Leake*, who directed a cold infusion of bark and antimonial powders.]

15th and 16th. Delirious in the night, stools foetid, pulse quick and languid. Antimonials omitted, and the camphorated julep ordered to be given often, with a strong infusion of cortex.

17th. Much the same. Medicines continued.

18th. Worse in the night, the abdomen much swelled, stools black, foetid and involuntary. The medicines were continued as long as she could take them, and an opiate at night was given.

19th. In the morning the patient died.

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Dr. Leake directed the body to be opened, the next day at night, in the presence of *sixteen gentlemen* of the faculty. The abdominal integuments being removed, the omentum was found inflamed on one side. The intestines were much distended with wind, especially the colon. On the stomach was found a small, gangrenous spot. The other viscera, as well as those of the thorax, had no diseased appearance.

The contents of the pelvis were found, and the uterus contracted to the size of a small melon. After this examination the *Section of the Symphysis Pubis* was performed, in order to ascertain *how much space might be gained between the divided bones.*

The cartilage being laid bare, by *Mr. Poignand*, surgeon, an obscure motion was perceived between the bones upon moving the thigh up and down, and the cartilage being very soft, was then cut through by *Dr. Leake*, with great ease and without wounding the neck of the bladder,

bladder, or any of the contiguous parts. The ossa-pubis immediately receded from each other about one inch, and with very gentle force were separated *two inches and an eighth*. The contents of the pelvis were afterwards removed, and on examining the *internal, posterior ligaments* of the bones of the pelvis, they were neither lacerated or in the least injured.

This operation gave general satisfaction to the gentlemen present, of whom, as a pupil, and *Hospital Assistant to Dr. Leake*, I had the honor to be one.

From the circumstances attending this case, where no part essential to life was cut or injured, Dr. *Leake* as well as the rest of the gentlemen, were inclined to think the section of the pubes, in safety and advantage, preferable to the Cæsarian operation.

J. Lawton.

Westminster New-Lying-Inn Hospital,

December 15th, 1778.

Several

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Several other medical gentlemen and pupils intended to have been present at this operation, but were prevented by receiving intelligence too late.

With respect to the number of patients delivered, and likewise those who died in the *Westminster New-lying-in-hospital*; the account, as appears by the Hospital books, stands thus: From the 20th of April, 1767, to the 30th of November, 1769; out of two hundred and eighty-five delivered, three had the *Child-bed Fever*, of whom, *Eliz. Waters*, and *Eliz. Becket* recovered, and *Sassannah Vernon*, who had twins, died; also *Ann Moody*, of the *small pox* the day after delivery.

From the foregoing date, to the 31st of May, 1770, (being the epidemic season) out of sixty-three delivered, nineteen had the *Child-bed Fever*, besides others more slightly affected with it; of which number, eleven died in the hospital, and two more out of the house, who were removed at the request of their

ON CHILD-BED FEVER. 243

their friends; namely, *Frances Williams* and *Mary Gammon*, *Elizabeth Kibblewhite*, also died of inflammation in her bowels, during the above period.

From the 15th of *May*, 1770, to the 29th of *September*, 1772, out of three hundred and five delivered, two died, viz. *Sarah Evans*, and *Hannah Jeffreys*.

This fever was also *epidemical* in *London* in the year 1760, of which, twenty four died in the *British Lying-Inn-Hospital*, from the 12th of *June*, to the latter end of *December*; there being no instance of any such mortality in so short a time, till the year 1770, when it was again extremely fatal.

THE SECTION OF THE PUBES first proposed by *M. Sigault* in his *Thesis* at *Angiers*, and afterwards by him successfully performed on the living body at *Paris*, Sept. 2d. 1777, having lately much engaged the attention of Medical Gentlemen, I shall beg leave to offer some general Animadversions on that new and extraordinary operation; particularly

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particularly as *M. Le Roy*, Professor of Midwifery, and doctor regent of the faculty of physic at Paris, who assisted him in the performance of it, was pleased to honor me with his *Treatise on that subject*; and as *Mr. Poignand* the Translator has thought fit to address it to me.

Mr. Sigault supposes that the cartilages interposed between the bones of the pelvis become relaxed by the effect of pregnancy, and therefore that they recede from each other in the time of labor, by the pressure of the *child's head*. He describes the SECTION OF THE PUBES and proposes it as a substitute for the *Cæsarian operation*; the propriety of which, as well as the objections brought against it, I am desirous to examine with attention and candor; for little advantage can arise from opinions, where men rather contend for superiority than truth. The spirit of enquiry is only commendable when it is exerted for the improvement of science, and solely directed
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for the *public good*. But although, I am inclined to think favorably of this operation, for reasons hereafter assigned, I know that nothing but time and future experience can sufficiently determine whether it ought to be rejected or adopted.

The structure of the parts on which this operation is performed, being perfectly known to every medical reader, their description, as well as that of the operation itself, would be unnecessary, especially as the last is circumstantially set down in Mr. LeRoy's tract, entitled *Practical Enquiries on the Section of the Pubes*, to which I must refer him.

The following are the objections to this *New Operation*; First, that the cartilage at the symphysis of the pubes, may happen to be *ossified*, which would prevent its division by the knife: Secondly, that the neck of the bladder may be wounded: Thirdly; that the space gained by the section of the Pubes, may not, in a narrow pelvis, be sufficient

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cient to allow the child's head to descend through the cavity: Fourthly; that the union of the cartilage may not be affected: And lastly, that the *internal, posterior ligaments uniting the sacrum and ilia*, may be torn asunder, by dividing the bones of the pubes.

In answer to the preceding objections: First, it may be remarked that cartilage being a substance essentially distinct from bone, is never found ossified except in a *præternatural state*, or in *old age*, after the time of child-bearing is past, and where there could be no occasion for the operation. I cannot however, assent to the opinion of *Sigault*, that the cartilages of the pelvis, undergo a temporary change, and become softer in the time of pregnancy. The obscure motion perceived at the symphysis of the pubes, in the patient at the *Westminster Lying-in Hospital*, already mentioned, I believe was not owing to any additional softness, but entirely to its own permanent structure as a cartilage

cartilage which allowed of obscure motion, when considerable force was applied.

Secondly, the neck of the bladder being only slightly attached to the symphysis of the pubes, by cellular membrane, and not in close union with the cartilage; there *never can be the least danger of wounding it*, except the operator is unskilful and ignorant of the structure and situation of the parts.

Thirdly, the space only of *one inch* gained by *M. Sigault* from the section of the pubes, on the dead body, does not appear sufficient to enlarge the bony passage for the exit of a child's head, in a pelvis uncommonly narrow; but in the case of Mrs. Brasier, *M. Le Roy* found a separation of *two inches and a half*; and as the case at the *Westminster Lying-in Hospital* affords incontestible proof, that after the section of the cartilage, the bones of the pubes, without violence receded from each other, full *two inches and an eighth*, I have no doubt but
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so much additional space, would in general be sufficient to let the child's head pass, even in a pelvis so preternaturally narrow, that no other means but the *Cæsarian operation* could be devised for its birth.

Of all the causes of difficult labor, the most frequent and invincible obstacle to child-birth is that of a *narrow or distorted pelvis*; to remedy which, the *Section of the Pubes* seems more peculiarly adapted; but here we are told by some that although the *long axis* of the pelvis may from thence be extended from side to side, its *shortest diameter* from *sacrum to Pubes*, where additional space is most wanted, will not be increased in the same proportion, and therefore the operation cannot avail. This indeed, at first sight, looks like a specious and insurmountable objection, which if not duly attended to, and thoroughly examined, might greatly depreciate the merit and advantages of the new operation. I shall, therefore, beg the Reader's attention to the following circumstances, which

which if clearly understood, I presume will disprove and totally set aside what has so plausibly been alledged against it. By the *Section of the Pubes*, it is now generally allowed, even by its opponents, that the space gained by the aperture between the divided bones, is nearly *two inches and a half*, even in the dead body, where the parts are cold, and rigid, and consequently less yielding than in a living state. It will therefore follow, that as much of the occiput or hind head as is protruded into an aperture at the pubes of *two inches and a half*; so much precisely will be the space gained by this operation, and superadded to the short axis of the pelvis, from sacrum to pubes; and since the occiput presenting at the symphyfis is much smaller in diameter than the head itself; so much greater will be its projection into the aperture; and therefore the space gained from sacrum to pubes will be equal to the enlargement of the pelvis from side to side; which is the circumstance here contended

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for

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tion, and what we presume is fully proved, contrary to the assertion of those, who have opposed the new operation.

Fourthly, from the observations, and unquestionable authority of *Pott* and *Dr Le Faye*, we are assured, that cartilages will as firmly unite after division, as bones after a fracture. But, to put this matter out of all doubt, *Ganper*, a Dutch physician, made experiment upon a quadruped, by cutting through the cartilage of the pubes, and after dissecting the parts, he found they were firmly united.

Lastly, respecting the pretended laceration of the internal, posterior ligaments of the pelvis uniting the sacrum to the ilia, I must refer to the case at the *Westminster-Hospital*, already recited, where the section of the pubes was made in the presence of sixteen Medical Gentlemen, and where, notwithstanding the space gained was *two inches and an eighth*; no laceration or the least marks of violence appeared, but on the contrary,

contrary, those ligaments were found perfectly firm, and in their natural state. If so much space could be obtained without laceration in the *dead body*, where the fibres were cold and rigid, and their cohesion considerably weakened by natural tendency to dissolution; how much greater space might reasonably have been expected in the living subject, where the solids are more soft and yielding?

That these ligaments may be torn asunder by forcibly pulling open the bones of the pubes, cannot be denied; but the same thing will happen to a ship's cable, whenever a force more than equal to its resistance is applied. In short, with any reasonable degree of prudent caution, the laceration of these ligaments need never be apprehended.

Let us now take a comparative view of the *Cæsarian operation*, for the success of which, *Roussetus* contends with so much zeal, whilst *Marchant* condemns the operation as highly

gerous, and informs us that *Pare, Guillemeau, Viard*, and others of the first rank in their profession, found this operation extremely unsuccessful.

In the fourth volume of the London Medical Observations, may be found a case of *Cæsarian operation* accurately related, and the only instance that I know of, where it was performed upon the *living body*, in this great city, for upwards of a century past. From this case, as one which may be depended upon, I have transcribed the following particulars, being the leading circumstances, and most material, practical facts relative to the nature and event of that operation.

The *Cæsarian operation* was performed on *Martha Rhodes*, Oct. 21st. 1769, by Mr. Thomson, surgeon to the London Hospital, who informs us, that the patient did not lose more than four ounces of blood, though she died about five hours after. The body being opened, grumous blood which was computed to weigh about twenty

ty ounces, was found on the surface of the *omentum* and *uterus*. The cavity of the womb also contained blood, so that the whole quantity of this vital fluid lost by the operation was allowed to be *thirty ounces*. Mr. Thomson says, it is well known, that in natural labors, the discharge of blood will often much exceed that quantity; and therefore seems at a loss to form a judgment what might have been the immediate cause of this patient's sudden death.

From this last opinion I must beg leave very much to differ; but even admitting the quantity of blood discharged in a natural labor to be considerable, as it sometimes is; the danger should not be estimated simply by its quantity, but by the *short space of time in which it is discharged, as well as the nature of the blood itself, and the source from which it is derived.*

After delivery, the blood is very slowly evacuated from the innumerable small vessels proceeding from the womb, and enter-

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ing the cellular substance of the placenta, for the immediate service of the child; respecting the mother, this blood may therefore be looked upon as *redundant, and not essential to the support of her own body*. On the contrary, in the *Cæsarian section*, where the large dilated arteries and veins of the womb are divided, and *thirty ounces* of vital blood, or that merely, *maternal*, suddenly gushes forth in a full stream, I am inclined to think that so powerful a check to the circulation, may suspend the heart's motion, and prove the immediate cause of the patient's death, by producing a mortal syncope; particularly, when we consider, that the *hypogastric arteries* entering the uterus, proceed from large branches of the *aorta*, through which the blood circulates with extreme velocity.

But could we suppose the patient might escape a *mortal hæmorrhage*, after this operation; would not the large quantity of *grumous* blood extravasated in the cavity of the

the belly, from which it could not be evacuated, corrupt and destroy the contiguous vital parts, and prove the *remote cause of her death*.

The *Section of the Pubes*, which allows the child to be born by the natural passage, carries not with it those ideas of cruelty which attend the *Cæsarian Operation*, where the patient is, as it were, emboweled alive. No formidable apparatus is necessary; the section being made with expedition, and without pain or danger; no blood-vessel, nerve, or other parts essential to life are wounded; these divided, being only *cutis, cellular membrane and insensible cartilage*, from which neither *Hæmorrhage*, or *symptomatic Fever*, are to be apprehended.

These are my reasons for preferring the *New Operation*, by which the mother and child may probably *both be saved*; but where the mother at least, to whose safety our principal attention should be directed, would generally be lost by the *Cæsarian Section*.

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To those who vaguely give it as their opinion that this operation will not succeed, the answer is short; *it has already succeeded, and therefore it will again succeed*; particularly with such as are disposed to give it *fair and judicious trial*; but it will be prudent for every *Accoucheur*, not rashly to undertake this, or any other capital operation, on the living body, without the concurrence, and assistance of others of the profession eminent for their candor and skill.

M. Le Roy gives several examples of its success. *M. Desprez*, surgeon, in *Britanny*, performed the section of the pubes with happy event in 1778; and *Monf. De Lambon*, first surgeon to the Duchess of Lorraine, in a letter to *Monf. De Brambilla*, lately published at *Mons*, informs him that he had performed the section of the pubes on two patients, *with success*; one of which submitted to the operation *twice*, and is now in perfect health, as well as her child, of which she was happily delivered by the *second operation*.

My

ON CHILD-BED FEVER. 257

My ingenious friend, Dr. *Hausman*, of *Brunswick*, who did me the honor to number himself among my pupils, obliged me with a manuscript account of this operation successfully performed by Professor *Siebold*: His recital of this case, respecting its favourable event, is very different from what it appears in a periodical publication, but whether this may be owing to mistake or other causes, I cannot take upon me to say, as I have not yet had an opportunity of seeing the original case related by *M. Siebold*.

To conclude respecting the case of Mrs. *Souchot*, upon whom the section of the pubes was first performed by *M. Sigault*, such was the event, that both the mother and child were preserved; the circumstances appeared so extraordinary, that Commissioners were appointed by the *Medical Faculty of Paris*, to examine into the state of the case and success attending it, in consequence of which, the honor of prize medals was conferred on *M. Sigault*, as well as *M. Le Roy*, who assisted him in the operation. S E C.

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SECTION V.

*Of the Nature and Treatment of Uterine
Hæmorrhages, before and after Delivery;
and the new Methods of Practice recom-
mended by the Author.*

UTERINE Hæmorrhages and Convul-
sions being two of the most dan-
gerous and alarming maladies which can
happen to pregnant women; I am inclined
to hope, the observations contained in the
two following sections will become useful;
especially as they are drawn from repeated
experience, in the course of several years
practice. Few authors have treated pro-
fessedly or practically on those subjects; for,
it has been too much the custom of one, to
copy and adopt the methods of another,
and to recommend them from hear-say, or
on the authority of his predecessors, rather
than from the test of his own experience;
to the great detriment of true medical
knowledge.

A uterine

A uterine hæmorrhage or flooding, is a preternatural discharge of blood from the womb, arising from a separation of the *placenta* from its interior surface, which in general, may be looked upon as its immediate cause; but the remote causes are various; they may proceed from external violence, as blows, falls, or the over exertion of the body in lifting heavy weights. Inflammatory fevers, the violent passions of the mind, or whatever will preternaturally increase the momentum of the blood on the uterine vessels, may also be productive of this discharge.

Nothing will so much contribute to the true knowledge of uterine hæmorrhages, as due attention to the peculiar structure of the *placenta* and *gravid uterus*, and their attachment to each other; this will not only more clearly point out the source from whence blood proceeds, but also the degree of danger to the mother and child.

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The *placenta* may be looked upon as an apparatus or medium of intercourse, formed by nature for carrying on circulation between the mother and child : It is not only made up by one umbilical vein, and two arteries, which divide and subdivide till they become infinitely small, but also by a considerable quantity of *cellular substance* every where interposed among the ramifications of those vessels. This cellular part is abundantly supplied with vessels from the uterus, but they are to be considered as a system distinct from that of the umbilical vessels, with which they have no communication ; at least, that can be demonstrated ; for, the subtlest injections have never been found to pass into one, by filling the other ; the first can only be injected from the uterus, the last from the body of the foetus.

Hence it appears, there is a two-fold circulation in the placentary mass, and that although there is a continuation of vessels and *circulation of red blood between the uterus*
and

and placenta, there is none between the mother and child, by means of the umbilical vessels.

Indeed it has been matter of dispute, whether the ultimate branches of the placental vein anastomose with those of the uterus, so as to transmit red blood from the mother to the child; or whether they strike root in the uterus, and from thence only absorb a milky fluid for the nourishment of the foetus, which is afterwards converted into blood by the circulating power of its heart and arteries; and in the same manner as blood is generated by the chick in ovo.

Arantius, a learned Professor in the university of *Bologna*, I think, was the first who denied a circulation of red blood between the mother and child, by continuation of vessels passing from one to the other; and the rather, as he observes that there is no kind of proportion between the innumerable branches of the placental vessels, compared to those of the uterus, to render their

their anastomosis in the least probable

" *Illud tandem hanc vasorum unionem minime*

" *concedi posse attestatur, quod nulla sit vasorum*

" *uteri cum innumeris umbilicalium radicibus,*

" *Et capillamentis proportio, eoque magis quod*

" *uteri vasa per matricis propriam substantiam*

" *potius sanguinem effundant, quam ad inter-*

" *nam superficiem suis osculis pervingant.*"*

The late celebrated Dr. Monro, was of the same opinion. He imagined, the extreme branches of the umbilical vein took up a lymphatic part of the blood from the uterine sinus's, in the same manner that lacteals absorb chyle from the cavity of the intestines.†

Perhaps it may be urged, that although the umbilical vein only receives a nutritious fluid from the uterus, yet the arteries must return their red blood to it, otherwise it would become redundant; but seeing that

* *Arant. de Human. Fœt. p. 24.*

† *Edin. Med. Essays, Vol. II. p. 133.*

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that there is a free anastomosis between these vessels, in the substance of the placenta; the greatest part of that arterial blood supposed to be carried back to the uterus, is in fact, taken up by the umbilical veins, and returned to the child.* Indeed, the most accurate anatomists now seem to agree, that the ultimate branches both of the umbilical arteries and veins, reach the convex surface of the placenta, and proceed no farther.

If we may compare vegetables with animals; it seems most likely, that the child in utero is at first nourished by the same absorbent power, as roots in the earth; or like *parasite plants*, which draw their nourishment from that body into which they are inserted.† Perhaps it may also be a probable conjecture, that the uterine vessels which enter the cellular substance of the placenta,

* According to *Robault*, only a seventh part of the arterial blood is returned by the umbilical arteries to the convex surface of the placenta.

† Vide *Parson's Analogy* between the propagation of animals and vegetables.

placenta, may there deposit a nutritious lymph, which is afterwards absorbed by the extreme branches of the umbilical vein, for the service of the fœtus.

From this reasoning, drawn from the structure of the parts; a circumstance, which has often appeared unaccountable, because it was imperfectly understood, will become more obvious, viz. Why the child may survive, in utero, for a considerable time, and without being deprived of blood, although the mother is almost exhausted and brought to the point of death by an excessive loss of that fluid; for the blood, in flooding cases, is discharged immediately from those very vessels which spring from the uterus, and enter into the cellular substance of the placenta, and not from the extreme branches of the *funis umbilicalis* on its convex surface; the first being parts peculiar to the womb, the last proper to the child.

The

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The *false chorion* investing the exterior surface of the *placenta*, is also numerously supplied with those *uterine vessels*; and it may be laid down as a practical Rule without exception, that whenever a large quantity of this tender *vascular membrane* comes away, attended with pain and a sanguineous discharge; it infallibly denotes a separation of the *placenta* from the uterus; the patient will therefore necessarily *miscarry*, notwithstanding every attempt to prevent it; this reddish flaky substance, being as it were, the very cement and *bond of union* between those two parts.

The illustrious *Harvey* asserts, that when the mother was even extinct and almost stiff with cold, he had found the umbilical arteries beating, and the foetus vigorous and strong: He also denies the anastomosis of vessels between the *placenta* and uterus.

“ *Imo vero in ejusmodi Cæsonibus, membrana chorio etiamnum obvolutis, sæpe re-*
S “ *peri*

"peri (matre jam extincta & plane rigida)
 "arterias umbilicales micantes, fœtumque ve-
 "getum. Quare haud verum est spiritus a
 "matre per arterias ad fœtum pertingere:
 "Nec magis verum vasa fœtus umbilicalia
 "cum uteri vasis per Anastomofin con-
 "jungi*."

A new-born child will live many hours
 after the birth without nourishment;
 for it then exists by a circulation of its
 own, and being replete with blood and
 juices, stands in no immediate need of ad-
 ditional supply; in like manner it will
 continue alive for a given time in utero,
 when cut off from all communication with
 the mother; that is, after a separation of
 the placenta; but although it there re-
 ceives no red blood, it must necessarily
 languish and die at last from the want of
 lymph, or that nutritious something which
 is essential to life; like a tender plant,

which

which cannot long subsist without the use of water, or refreshing showers*.

Such fluxes of blood as happen after delivery, may be brought on by violent extraction of the *placenta*; distension of the uterus in twin-cases, from a second child; or by a defect of its contractive power, from a general weakness of the the solid system.

Uterine hæmorrhages are more or less dangerous, in proportion as the patient is advanced in the time of pregnancy. In the first two or three months, the embryo enjoys little more than *vegetable life*; the vessels connecting it to the *uterus* being very small; consequently, the blood is then discharged by such flow and insensible degrees, that there is generally time to supply the loss, by replenishing them with nourishing fluids, so as to keep up the circulation.

§ 2

When

* Vide, Greg. Nymman. de Vita Fœtus in Utero,

When this is the case, the patient will sustain the loss of a large quantity of blood, without much diminution of strength; but on the contrary, when the discharge is great and sudden, the event is frequently fatal; and the rather if it happens in the last months of pregnancy, when the uterine vessels are large and replete with blood.

The vast profusion of this fluid gives so sudden a check to the circulation, that there is not sufficient quantity returned to the heart to keep it in due motion; so that its action either languishes for a time, and the patient faints; or wholly ceases, and she expires in a *syncope*.*

Floodings from bruises or falls, are generally of the worst consequence; for the patient is then not only in danger simply from

* According to *Haller's* doctrine, the motion of the heart principally depends on the irritability of the right auricle, which is stimulated into motion, by the influx of blood from the *vena cava*.

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from the loss of blood, but also from the nature of the injury itself. They are also extremely fallacious and fatal in the last months of pregnancy ; for, they will frequently cease for a time, and remove the appearance of danger ; but as often suddenly return, and sometimes carry her off before there is time to effect delivery, which is the only expedient, in such cases, that can possibly save her life.

When the uterus is emptied of its contents, it contracts, and gradually becomes less in bulk, especially if the vital powers are not much impaired by the preceding discharge ; consequently, the current of blood in the branches of the *hypogastric* and *spermatic arteries* will meet with resistance, and its momentum on the bleeding orifices of these vessels being considerably diminished, the flooding will then either abate or totally cease ; so that a dexterous operator will sometimes be able to do more for the safety of his patient by ma-

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nual operation, than could possibly be effected by the most skilful administration of medicines.

When any part of the placenta has been separated from the uterus, it will not again adhere, as appears after delivery; for that precise quantity of it which was disunited, is plainly pointed out, by being covered with black, coagulated blood. Hence the reason is obvious, why those hæmorrhages which go off for a time, are so extremely dangerous by their sudden return; for they do not cease because there is a re-union of divided vessels, but because the circulation languishes from profuse loss of blood, so that the patient faints; during which interval, its impulse is diminished, and the vessels being freed from their distending power, will not only gradually contract from the natural cohesion of their parts; but the blood being almost in a state of rest, will coagulate, and as it were, seal up their contracted orifices. Here

Here it is necessary to remark that pernicious and destructive method of giving *heating cordials* or *spirituous liquors*, with a view to revive the patient, to which, many have unhappily fallen victims; yet it is still so prevalent, especially among the lower class of people, that it never can be sufficiently discountenanced, or its danger too fully pointed out. Many women, during their *fainting fits*, are plentifully supplied with warm spiced wine or caudle, with the addition of brandy, which will increase the blood's motion, and again force open the bleeding vessels; and thus they will alternately continue to flood, and faint till the hour of death. The design of such proceedings may be good, but the consequence will be fatal.

Although nothing is more difficult than to root out prejudice from ignorant minds; yet, he who will conform to vulgar errors at the expence of his patient's safety, and is afraid to oppose them, lest his own inte-

rest should suffer, acts below the dignity of his profession, and the principles of an honest man.

If the most unintelligent of mankind was asked, whether a person over-heated with strong liquor, or one half-chilled to death with cold, would bleed most profusely, on receiving a wound in any part of his body? surely he would reply, the former: The case is familiar in respect to *Uterine Hæmorrhages*; yet such is the prevalence of custom, that the method of giving cordials, as they are called, is still obstinately followed, contrary to the patient's safety, as well as reason, and common sense.

Those who consider the origin and distribution of the *hypogastric* and *spermatic arteries*, which branch off from large trunks, and numerously supply the uterus; must needs perceive with what rapidity the blood passes through those vessels; particularly the first, which are
very

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very large in the gravid state, and consequently, how soon the patient may be exhausted in profuse floodings, especially in plethoric habits, or where the action of the heart and arteries is increased by spirituous liquors, or heating regimen*.

Under such circumstances, the best cordials are those fluids which replenish the empty vessels, without heating the body; and therefore, broths prepared from animal substances, jellies, and the like, are, of all others, the fittest to afford expeditious nourishment; as they will soon be assimilated, and converted into blood, without much assistance from the stomach or vital powers, which at this time are so much impaired.

To subjoin particular histories of flooding cases, would prove of little use to a practical Reader; since profuse discharges of blood happening in the last months of pregnancy, are generally such, as no medicines

* Vide *Hewson's* Accurate Experiments on the Blood.

dicines have power to remove ; for as long as the uterus remains in a state of distension, so long will its vessels continue to pour out blood, especially where a large quantity of the *placenta* is separated from it ; and therefore, it would be very unsafe to expect from medicines, what can only be brought about by speedy delivery, which produces a *mechanical change* in the structure of that organ by removing its contents.

But although this is the principal expedient, and the most effectual remedy in such cases, unfortunately, it does not always secure the patient from future danger ; for the force and energy with which the womb contracts, being in proportion to the bodily strength, rather than the length of time the patient has been delivered ; whenever that is greatly diminished, the flux of blood may still continue. This is the reason why a flooding before delivery sometimes occasions

sions the like discharge afterwards. In the several bodies which were opened, when the *Child-bed Fever* proved mortal; I had sufficient opportunity of ascertaining this fact, and constantly found that where the patient was strong, and not invaded with fever till later than usual, there the uterus was greatly diminished in bulk; but on the contrary, where she was naturally weak, or rendered so by a sudden attack of the disease; it then became inert, and was found less firm and contracted.

Puzos particularly takes notice, that when the uterus contracts imperfectly after delivery, the consequence is dangerous; and also remarks, that after the patient is delivered by turning the child; she often dies in consequence of the violence applied, or by a continuance of the discharge: he asserts, that floodings are most profuse when the labor-pains are weakest, and therefore concludes, it would be right in such cases, to procure pain artificially, by dilating the

os uteri, which will put the uterus into a state of contraction, by which the child will at last be expelled. This he calls the happy medium between natural delivery, and that which is forced, by violently turning the child; and assures us, that by this method he had been extremely successful.

I remember an instance of the good effect of this method, in a gentlewoman to whom I was called in *Fork Buildings*, several years ago. From Sunday evening till the Tuesday following about twelve o'clock, at which time I was desired to visit her, the flooding had continued profuse.

She was attended by her midwife, and had drank plentifully of port wine, in which a hot iron had been quenched, to render it the more astringent, as I suppose: Her aspect was death-like, she frequently fainted; her pulse was almost imperceptible, and she seemed sinking very fast.

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The full time of reckoning was expired ; but as her strength was much exhausted, the labor-pains were inconsiderable, and the os uteri but little dilated. I immediately broke the membranes, that the resistance to the languid contraction of the uterus might be less, and supplied her with *veal broth*, made moderately strong, but without salt or spices : Of this nourishing fluid, given cold, she swallowed a tea-cupful, or as much as her stomach would bear, every quarter of an hour, having taken nothing of the like kind before. The cold, fresh air, was also freely admitted into her chamber, which seemed to give her new life ; for she found her strength and spirits, as well as her pains, increase very fast ; and by dilating the os uteri, they at last became so strong, as to effect the birth before evening, without the danger of turning the child, which, notwithstanding the vast discharge of blood, was born *vigorous* and *strong* ; agreeable to what I have remarked elsewhere.

A curious example of the efficacy and sufficient quality of nourishing fluids in sustaining life and restoring strength, even when the assimilating powers of body were not sufficient to convert them into blood, is mentioned by *Lower* in his book *De Corde*, viz.* *Adolescenti sedecim annos nato cum magna sanguinis copia (qua de causa non refert) perbiduum continuo erumperet, neque medicamentis aut arte ulla cohiberi potuit; jussulis cum reficere & recreare amici & astantes curarunt; cumque ea valde avide expeteret atque assumeret, fluxus subinde concitior quoque factus est, & tandem res eo devenit, ut massa sanguinis fere tota emissa, quicquid jam efflueret, dilutum & pallidum, sanguinis neque naturam neque speciem pre se ferret, ipsi jussulo quod toties hauserat quam sanguini similis: Atque eadem forma per diem unum aut alterum duravit hic aqueus fluxus, constante interim cordi motu suo, donec fluxa demum consopito juvenis paulatim integræ salutis restitutus est, & exinde in virum robustum & quadratum accrevit.*

Int

* *De Corde*, Cap ii. p. 63.

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In order to know whether *topical applications, medicines, or manual operation,* will most effectually relieve the patient in uterine hæmorrhages; their various causes should be attentively considered, with the several circumstances of the case, also her habit of body, and the different state of the uterus before and after delivery.

In those fluxes of blood which happen during labor, or at the full expiration of pregnancy, it will be proper to break the membranes, for the uterus will contract after the discharge of the waters, and the flooding will therefore be diminished: particularly as the bleeding vessels will then be brought into contact with the child, as it were, by compress and bandage. But as this method only procures relief to a certain degree, if the symptoms become urgent and the labor does not quickly advance, the patient ought to be delivered as soon as possible.

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When the child's head shuts up the os uteri, the patient may continue losing blood profusely into the cavity of the womb, although none externally appears; this is to be feared when her pulse sinks, attended with great faintness and sudden loss of strength, without any evident cause; and will best be known by pressing up the head in the absence of the labor-pains, so as to let the confined blood escape. Such cases are extremely dangerous and fallacious, where the operator is not sufficiently upon his guard.

Sometimes the *placenta* has been found presenting loose at the os uteri, or adhering to that part; in both cases, especially the first, a flooding will happen, attended with great danger; and therefore will require speedy delivery, which may be effected either by the *long double-curv'd forceps*, or turning the child, as appears most eligible from different circumstances; for as the whole placentary mass is separated from the womb, the least delay would prove fatal to the patient.

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Those hæmorrhages which happen where the child has long been dead in utero, are also attended with imminent danger; because, as there is then no longer any circulation in the *placenta*, the case will be nearly the same as when it presented loose, although it does not appear so alarming.

January the 20th, 1765, I was sent for to Mrs. G—, a gentlewoman in *Piccadilly*, who was seized with a flux of blood from the uterus, near the full time of pregnancy; as it was not profuse, and her strength and spirits were good, I waited for some hours in expectation of stronger pains, but as the discharge seemed to go off, and she was disposed to sleep, I left her and desired to be called if it returned with violence, or when the pains became stronger. When I visited the next day, they were inconsiderable, and, the os uteri was very little dilated; but though she continued to lose blood, her strength seemed little im-

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paired:

paired : In this situation she remained several days, during which, she took a decoction of *bark*, with *tinct. rosar. r.* and a few drops of *tinct. thebaic.*

At last the discharge became intolerably putrid, and was soon followed by a large secretion of milk, which flowed from her breasts by the slightest pressure : The flooding now began to increase very much ; she grew weak and faint, and certainly would soon have sunk under the discharge, had she not speedily been delivered.

The child had been dead several days before the secretion of milk, which began as soon as the *placenta* was separated from the womb ; for then the hæmorrhage was observed to increase. The same circumstance may happen when the foetus in utero is weak, and the absorbing power of the *placenta* from thence in part destroyed ; agreeable to what is laid down by *Hippocrates* in his Aphor. viz. *Mulieri in utero gestanti,*

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*renti, si multum lactis ex mammis fluxerit, infirmum fœtum significat.**

In strong habits, where the uterine fibres are tense, the flooding generally stops, and the placenta is easily excluded soon after delivery; but on the contrary, when the patient is very weak, much longer time is then required for its coming away; and if it should be unwarily extracted before the uterus has had sufficient time to contract, or where it afterwards continues loose and inactive; a mortal hæmorrhage may chance to ensue. Indeed it sometimes happens that the loss of blood is profuse; even after delivery, where the placenta remains; under which circumstance it may be proper immediately to take it away: Here the action of the uterus is so extremely languid, that it has not power either to expel the placenta, or large quantity of coagulated blood collected in its cavity: A fatal instance of

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this

* Sect. v. Aphor. 52,

this kind occurred to me in the year 1770, in the case of Mrs. W—— near Westminster-Bridge, to whom I was called about an hour and a half after she had been delivered by her midwife.

The internal use of medicines, as far as I have observed, ought never solely to be depended upon in such cases; for although they may afford some relief in a certain time; the patient would generally bleed to death before they could have sufficient effect; and therefore, immediate recourse must be had to topical applications, such as *oxycrate* or *sharp vinegar*, in which thick linen compresses have been dipped, and which are to be applied cold to the belly and loins, and renewed as soon as they grow warm, otherwise they will relax rather than constrict.

Gentle pressure on the belly, by means of a broad circular roller, will also prove of service, by resisting the too rapid course
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of the blood through the uterus, and also by assisting its languid contraction.

The patient should be kept very *cool*, and if necessary, *exposed to cold air*, even in the *midst of winter*, by opening doors and windows, so as to let it be equally diffused round her chamber; her drinks should be given *cold*, and acidulated with lemon juice or mineral acids; and if ever the use of *styptics* can prove of service, perhaps it may be here; where the uterus, although empty, has not the power of being restored to its former state. I have found a strong *decoction of bark and elixir of vitriol*, with a small quantity of tincture of cinnamon to make it grateful, more efficacious than any thing I have seen tried.

The form may be varied at discretion, and if necessary, the extract may be added, viz,

R

Decoct. Peruv. Cort. ʒi

Extract. ejusd. moll. ʒi

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Tinct

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Tinct. Rosar. rub. ʒss

— *Cinn. ʒiij*

Confect. Alkerm. ʒj fiat haustus pro re nata exhibendus.

When the discharge is attended with much pain or irritation of the uterus; five or more drops of *thebaic tincture* may be joined with each draught; or, what will produce its effect with more certainty, a liberal dose of the *pil. e. styrae*, or *extract. thebaic*. The first may be given from two to six grains or more, and the last from half a grain, to a grain and half, which may be repeated as occasion requires; especially, where the habit is not plethoric, and when the symptoms are extremely urgent.

If all those methods fail, and the patient is in imminent danger; the *aqua aluminosa batean.* or a weak solution of *colcothar of vitriol*, injected into the cavity of the uterus as a styptic, will probably restrain the discharge; by coming into immediate contact with

with the orifices of the bleeding vessels; but those remedies are only applicable after delivery, when it is empty and uncontracted.

My worthy and accomplished friend Dr. Gordon, a native of Denmark, and assistant to the Professor of Midwifery at *Copenhagen*, who attended my Lectures last winter, informed me, that agreeable to the above hints, they had injected *cold water* into the *uterus*, in several cases of profuse flooding, with the most desirable success, and without the least danger, or subsequent bad symptoms. *Saxtorph* also recommends oxycrate to be injected into the *womb* in uterine hæmorrhages, after delivery, and mentions several cases in which it succeeded after every other method had failed.*

Hoffman tells us, he succeeded in stopping a profuse *uterine hæmorrhage*, which had withstood every other method, by passing up *pledgets of lint*, dipped in a solution of

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colcothar

* Vide, *Acta Societatis Medicæ Havnienfis*.

colcothar of vitriol, as high into the vagina as possible ; and since the patient afterwards conceived, and had a happy delivery, he observes that the functions of the uterus were not in the least injured by the styptic power of this application.

M. Leroux, surgeon to the General Hospital at *Dijon* in France, two years ago, published a Treatise professedly on *Uterine Hæmorrhages*, with which he honored me as a Present ; he particularly mentions the method laid down by Hoffman, as well as those which I have recommended.

Leuret hit upon a very odd, but ingenious expedient in stopping a violent flooding after delivery, which otherwise would soon have proved fatal ; He introduced a piece of *ice* into the uterus, which being struck with sudden chill, immediately contracted and put a stop to the hæmorrhage.

The most extraordinary instance of a flux of blood from the womb, which I have ever heard of, fell under the observation of the late Dr. *Cole*, who, some years

years ago, practised midwifery in *London* with great reputation: On opening the body, the whole surface of the *placenta* was found adhering to the uterus; but a great part of the *false chorion* investing the membranous bag which contains the child, was separated from it; and consequently, an infinite number of those vessels with which it is supplied from the uterus, being torn asunder, the effusion of blood was so great as to become mortal. From what cause this accident was brought on I have not been able to inform myself. Those slight discharges, which sometimes go off, and allow the patient to proceed her full period of gestation, have been imputed to loss of blood from the *false chorion* of the bag only, and not to a separation of the *placenta* itself; and indeed notwithstanding what has already been said, I am still inclined to think so; for whenever any part of the last is dis-united from the uterus, there is the greatest reason
to

to suppose it will never again adhere, although *Noortwyk*, in his history of the gravid uterus, has asserted the contrary.*

Some floodings have occurred, attended with very uncommon circumstances. The celebrated *Albinus* mentions a case, where only the central part of the placenta being loosened, a large quantity of coagulated blood was lodged between it and the womb, as it were in a bag; and consequently not a drop was externally discharged, so as to foretel the danger.

Sometimes blood has been found to proceed from the vagina; and at other times from a rupture of vessels on the concave surface of the placenta, or even in the funis itself, which must necessarily soon prove fatal to the child, but will not proportionably endanger the mother. The preternatural shortness of the funis, or it being twisted round the child's neck, have also been supposed to bring on flooding; for if

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* *Noortwyk de Uter. Gravid. p. 28.*

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it then moves powerfully, the placenta may be torn from the uterus,

Whatever subjects the body to violent motion, or agitates the mind, should be carefully avoided; for it has already been shewn in treating of *Child-bed Fever*, at page 88, how much the force of the circulating blood on its vessels is increased by muscular motion. Coughing, sneezing, a tenesmus, or other efforts which lay stress on the womb, all tend, in degree, to destroy its union with the contained parts; especially, immoderate exercise in the last months of pregnancy, when the child is large and ponderous,

Passions of the mind, especially sudden terror, have also frequently been known to produce this disorder; a very remarkable instance of which is related by *Salmuth*, as follows* :

Archi-

* *Salm. Obser. Med. Cent. x. 3. xli*

*Archiatrī Anhaltini D. S. K. conjunx puer-
pera lactat infantem sub noctem. Per jocum a
mulieribus quibusdam ex convivio domum ten-
dentibus fores & fenestræ nimis impetuose pul-
santur. Illa hinc admodum perterrita, totoq.
corpore contremiscente, repente excitatur proflu-
vium mensum, in annum integrum perdurans,
& adeo quidem copiosum, ut per stragula etiam
deflueret, atque ex eo ipsa tandem moreretur.*

Some years ago, I was desired to visit
a gentlewoman near *Berkley-Square*, who
was seized with flooding from over-
hasty extraction of the *placenta*, by which
she was reduced to the last degree of
weakness: I desired she might be kept
extremely quiet, and supplied with fre-
quent nourishment; I also directed a
mixture with *tincture of roses* and soft ex-
tract of *bark*, &c. of which she took two
spoonful as often as her stomach could bear:
In a short time she found herself much
recovered, but towards morning, by only
turning herself hastily in bed, the discharge

im-

immediately returned in great profusion. I was again called, and found her to all appearance at the point of death ; but by the application of thick compresses dipped in cold vinegar, to her belly and loins, with the same methods as before, she at last perfectly recovered.

Excessive anger, or sudden fear produce spasm, or contraction of the vascular system, by which blood is driven from the surface to the centre of the body ; as is evident from paleness of the face, which is instantly followed by throbbing and palpitation at heart ; soon after, the countenance becomes florid, from re-action of the heart, which throws out blood to the surface again. Hence, during the spasm, the venous blood is violently driven to the right auricle, and the velocity of the arterial blood discharged from the left ventricle into the *aorta descendens* will therefore be considerably increased, and consequently, that circulating through
the

the arteries of the womb, from which the placenta may be forced away, and hæmorrhage ensue.

This tumult in the body is produced by nervous influence which affects it like a slight electric shock ; accordingly, women of delicate constitutions, whose nervous system is extremely irritable, are, of all others, the most subject to those complaints ; I have likewise observed, in such habits where the patient was not pregnant, and the *uterus*, therefore, not susceptible of the impression ; that pain in the bowels or diarrhoea have often been brought on, and sometimes a dangerous fever ; particularly when the former symptoms did not occur.

Bleeding and *styptics*, with the liberal use of *opium*, and application of *ligatures* to the extremities of the body, are the remedies which have been principally depended upon, for the cure of *uterine hæmorrhages* ; and therefore it will be necessary to examine their effects.

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By attending to the circulation, it is evident, that *bleeding* can seldom be proper, except in the beginning of those floodings which happen before delivery; or when they arise from plethora; an inflammatory fever, or external violence. Sometimes, indeed, if the patient should be threatened with this malady, after violent surprize, it may also be requisite; but as in general, weakly, hysterical women, who have been observed to bear the loss of blood with inconvenience, are the ofteneft thus affected, it should be directed with great caution; especially, as *opiates* and the *warm bath* will answer much better, by dissolving the spasm, and soothing the nerves into a state of tranquillity.

Besides; it has been proved that the contraction of the uterus after delivery, upon which the abatement of this discharge chiefly depends, will be in proportion to the bodily strength; and therefore, an additional loss of blood from the arm at that period,

period, would farther endanger the patient, both by diminishing the action of the womb, and giving so sudden a check to the circulation, as might occasion dangerous faintings, or perhaps a mortal syncope.

Styptic medicines have been supposed to restrain internal hæmorrhages, by entering the blood, and constringing the orifices of the bleeding vessels; and therefore are accounted salutary, and efficacious in such complaints; but with what foundation, I appeal to common experience.

If styptics produce their effect by contracting the vessels, they must also increase their action on the contained blood; for it will be nearly the same thing, with respect to the velocity of the blood; whether its vessels are preternaturally filled, when their diameters remain the same as before, or whether their diameters are preternaturally lessened, when their quantity of blood is the same; or in other words,

words, *when the same quantity of blood is contained in a narrower space, its vessels will from thence become fuller.* For example ; if a certain quantity of any fluid is forced through two flexible tubes of different diameters, but of the same length, and in the same given time ; its velocity in the smallest tube will necessarily be greater than in the other : Hence it becomes manifest, that if styptic or astringent medicines act by contracting the orifices of the bleeding vessels, they must also act universally on the vascular system ; and if so, by lessening the diameters of the several vessels, their action on the contained blood will be increased, which must also necessarily increase the flooding.

If it should be alledged that they operate by coagulating the blood, and not by bracing its vessels ; or that, like *opium*, they produce their effects by mediation of the nerves of the stomach, without entering the blood at all ; it is to be remarked, that

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whatever thickens the blood, will, most probably, also constrict its vessels. In short, by what means soever they affect the habit; it is plain that an hæmorrhage can only be stopped either by such things as contract the ruptured vessels, or diminish the force of the fluid passing through them. The first of these effects has already been considered; and the last must be denied, since what occasions *thirst and fever*, as styptics do, cannot properly be said to lessen the circulating power, but increase it.

No wonder then that *Hoffman* asserts, he has often seen Uterine Hæmorrhages increased by styptics, but also obstinate complaints of the chronic kind, such as cachexy, dropy, or hectic fever, brought on by their preposterous use. Agreeable to what is advanced by that excellent practical physician, I have seldom ever known the *pulv. stypt. tinct. saturnin.* or other powerful astringents, given in such cases, without an increase of the hæmorrhage, or some other

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bad effect : That they will generally render the body costive, and often create great thirst, head-ach, and other febrile symptoms, is certain ; but the chronical complaints, with which they are charged, were more probably owing to the profuse loss of blood happening at the time they were administered, than to the subsequent injurious qualities of those medicines : However, the following instance, as well as several others, which it would here be unnecessary to mention, will shew that they are not void of danger, and therefore, ought to be directed with the utmost caution.

In the year 1770, a lady in *Stanhope-Street, May-Fair*, of a very delicate, valetudinary habit, had been long subject to the *fluor albus*, as well as an immoderate flux of menses at undue periods, which had very much reduced her strength : By the advice of an eminent physician, she took *sacch. saturn.* in a bolus, twice a-day, and continued it upwards of a week ; but did not find that

it either restrained the discharge, or had any good effect respecting her bodily strength; on the contrary, it at last brought on an obstinate constipation of the bowels, attended with such racking, colic pains, and oppression at stomach, as obliged her to keep her body almost double. Being desired to visit her, I directed draughts with *manna* and *ol. amygd.* with *emollient clysters*, and the *warm bath*; she also drank warm veal broth by intervals. After two or three lax motions, she was much easier; but as the soreness of her bowels continued, she took an emulsion with *sperm. ceti*, for a few days, which removed it; and afterwards, by the use of a strong decoction of *bark*, with an *injection* and the chalybeate waters, she was entirely freed from the fluor albus and all her other complaints.

Internal hæmorrhages will often at last spontaneously cease, without the assistance of any medicines whatever, especially when profuse; for as the power of the heart on
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the circulating blood will then be greatly diminished, its momentum on the bleeding vessels will be considerably less; and it has already been remarked, that they will naturally contract when freed from their distending power. Hence there is reason to think that the cessation of this discharge, after the exhibition of styptics, is not owing to such medicines, but to a diminution of the circulating force from loss of strength.

Instead therefore of bracing the solids, it would be more proper to recur to the use of things which have a power to relax, and as it were, suspend their action: Such medicines are called *sedatives*, and are supposed not only to lessen the circulating force, but produce a more equal distribution of blood, and occasion the derivation of a larger quantity from the interior vessels to the bodily surface. Hence the uterine arteries will be relieved from their distension, and the flux of blood proceeding from thence will consequently be less. To this

end, the fourth part of a grain of *emetic tartar* may be given, and repeated by due intervals, so as only to excite nausea, without vomiting; also *saline draughts*, with *nitre*; or the *sal sedativ. of Homberg*, from five grains to a scruple. In what manner such medicines operate, is difficult to determine; but that they often have a salutary effect, is evident from experience.

How far the effect of *opiates* may be depended upon, or under what circumstances they are pernicious in flooding cases, it will next be necessary to enquire. From some experiments made by Dr. *Alston* on frogs, it appears, that *opium* taken internally, will for a time, retard the blood's motion, by diminishing the vital power of the heart; and this circumstance, so far as it regards those small aquatic animals, is still further confirmed by that incomparable Physiologist the late Dr. *Whytt*: Such experiments are pleasing and curious, but the inferences arising from them, when applied to the

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the human body, are not so conclusive and satisfactory, as they at first appear; for many substances which produce a mortal effect on one species of animals, are not found injurious to another; and the same animal is very differently affected by the same thing at different times. Would it not therefore, be a more certain way to determine the effects of *opium* on human bodies, by attending particularly to its operation, on such bodies only?

In several cases, where it was necessary to direct *opiates* for women, at the beginning of labor, to remove their unprofitable pains and procure sleep, I have been surprised to find they had a very contrary effect, and that from thence the pains were evidently much increased.

Dr. Young, who wrote professedly on *opium*, is the only author I know, that takes notice of the same thing. His observations are founded on long and extensive experience, which he confesses often contradicted the

opinions he had adopted from theory ; consequently he frequently changed his methods of practice ; and it is much to be wished that an example so laudable, was more universally followed. Indeed, the greatest part of his book appears to be a true history of the effects of this extraordinary medicine, and as he rather relates what he saw, than what he expected to see, his authority is more to be regarded.

Baron Haller, in his dissertation on the irritable parts of animals, observes ; that although *opium* destroys the peristaltic motion of the intestines, and irritability of the body in general, it leaves the heart unimpaired. What I have seen of its effects on the human body, exactly corresponds with this remark ; for though it may suspend some of the secretions, it rather, at first, *quicken the blood's motion*, than retards it. For instance, a moderate dose will strengthen and enlarge the pulse, the eyes sparkle, the countenance becomes

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becomes florid, and a heat and itching of the skin succeeds; but what appears most extraordinary, those pains which have sometimes been increased by it, in a small quantity, were speedily removed by giving a more liberal dose. In short, I have clearly seen internal hæmorrhages rather increased than lessened by its use; and therefore, think it ought not to be given, except in cases of necessity, as its effects are evidently similar to those of volatile medicines, or strong cordials.

In the beginning of floodings which arise from plethora, fever, or external violence, especially where the *pulse is hard*, and the skin dry; both *opiates* and *styptics* are highly pernicious. *Bleeding*, *laxatives*, and *spare diet*, with cooling regimen, are best adapted to answer the intention of cure. The judicious *Hoffman*, therefore, with great reason, directs the liberal use of *spring water* with *spirits of vitriol* and *syrup of red poppies*, as a medicine more salutary

salutary than the most boasted specifics : On the contrary, in the decline of those discharges, where the *pulse is weak*, and the *circulation languid*, from loss of blood, it will be proper to keep the patient in a horizontal position, lest she should faint. A *strong infusion of bark*, and even cordial medicines may also be administered, especially after delivery, where there is always less danger of the flooding's return; the resistance to the womb's contraction being then taken away. Nourishment should be given often, and in small quantities, that the empty vessels may be replenished by degrees ; otherwise, as the stomach is weak, and assimilating powers of the body much impaired, the patient will be apt to fall into *dropsy, consumption, or hectic fever*.

The ancients applied *ligatures* to the inferior extremities, for the relief of uterine hæmorrhages ; from which it may be concluded, they knew more of the circulation
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than has been imagined ; for it is plain they had recourse to this method, with a view to retard the venous blood in its return to the heart, and consequently to abate the circulating force. But this practice does not seem just, neither is it found experimentally useful ; but on the contrary, dangerous and irrational.

Let us suppose, for instance, that a column of blood is driven down the *aorta descendens*, by the action of the heart, and that it is distributed to the lower extremities, by the division and subdivisions of the *iliac arteries*, from which the *uterus* at last receives its blood. The extreme branches of all these arteries have corresponding veins, which take up their blood by *anastomosis*, and after uniting and re-uniting, they form the *vena cava inferior*, or one large trunk, which returns blood from the inferior parts of the body, to the right auricle of the heart ; if therefore, from any compression of those veins, the reflux of their blood is prevented, they

they cannot then freely receive it from the arteries ; consequently, the *hypogastrics* and *spermatics* which supply the *uterus* with blood will become over-charged and distended, and the patient will flood more abundantly ; as the following ingenious experiment will clearly demonstrate.

Dr. *Hamilton* of *Edinburgh*, being called to a young woman who had labored under obstructed menses for near seven months, from catching cold ; and finding that various remedies had been tried in vain, directed compresses to be applied tight upon the *crural arteries*, by means of a tourniquet, which after remaining about twenty minutes, rendered the pulse quicker ; in half an hour, she began to perceive a sense of weight and fulness in the region of the *uterus*, and in an hour and a half after the first application of the ligatures, the menses began to flow.

If it should be alledged, that the effect here produced, was owing to compression of
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the *arteries*, and not the *veins*; it may be replied, that the means made use of to compress the first, must necessarily have the same effect on the other. But setting this reasoning aside; if simple pressure on the crural arteries has been known to bring on menses, after long obstruction, by impeding the direct course of their blood, and throwing a larger quantity on the *uterine vessels*; so would the same degree of pressure when applied to the *veins* themselves; which may be looked upon as so many reflected arteries, void of pulsation, because of their distance from the heart, which cannot extend its influence beyond the *anastomoses* of these two orders of vessels.

Having laid before the Reader such general remedies as have been thought most conducive to the relief of that dangerous *malady* under consideration; and pointed out the pernicious tendency of a heating regimen, or the exhibition of cordial medicines; I shall now endeavour

to shew the good effect of a *contrary method*, both as supported by reason, and experience; at the same time confessing, that the perusal of Dr. *Stevenson's* ingenious Essay on the effects of heat and cold on human bodies*, and afterwards, what I had read in the Commentaries of the celebrated *Baron Van Swieten*, in some measure, first suggested to me the propriety and expediency of such practice. The first of those authors has very sensibly refuted the absurd doctrine of *derivation* and *revulsion*; and shews that *pediluvium*, or application of warm water to the feet, the effect of which was supposed to depend upon those principles, is owing to a cause directly contrary to that hitherto assigned; as the following experiment will clearly evince.

Dr. *Stevenson* caused two youths to put their legs in warm water, and whilst they continued there, he counted their pulses by a watch measuring seconds, according to the

* Edinburgh Medical Essays, vol. vi. p. 8.

the different degrees of heat in the water, which was gradually increased and applied from time to time : At eight o'clock in the evening, the pulse of the first beat sixty-six, and that of the second eighty-four. As the heat was increased, they began to breathe quicker, their countenance became florid, the veins of the face and hands were much distended, and the pulse increased in proportion ; in the first, it beat eighty, and in the second, ninety-eight strokes in a minute. In the above experiment, both their pulses, which in the beginning, were soft and small, became full and hard ; and not only the parts immersed in water, but the whole body was swelled : The pulses of the wrists and temples also beat fuller and quicker, as well as those arteries derived from the *aorta descendens* ; and consequently, there could be no *revulsion*. The legs being then removed out of the warm water ; in about half an hour's time, all the above symptoms of fulness went off,

off, and the pulse in each gradually returned to its former state.

From these premises, the Doctor, with reason concludes, that the blood passing through the vessels of the legs, being heated by the *pediluvium*, imparts its additional warmth to the general mass ; which being rarefied, takes up larger space in the vessels, and circulates with more rapidity than before ; and thus every part of the body is affected with a sense of fulness. Hence, he infers the great danger of this application in *hæmorrhages* from the nose or lungs, or in disorders of the head or breast, arising from plenitude ; cases where it was often formerly applied, and must as often have been pernicious to the patient. What is ancient or modern, is not therefore right or wrong ; though this is not the only instance where things, however preposterous and absurd, have derived such sanction from antiquity, as to render them the standard of future practice.

Van

Van Swieten, in treating of the diseases of virgins, expresses himself in the following manner :

Cum autem pedes & crura ab iliaticis arteriis externis sua vasa accipiant, uterus ab hypogastricis non tandem, sed ab iliaticis externis etiam & variis inter se anastomosis communicent (1) videri potest) facile patet, quare, per balnea laxatis pedum vasis, & dein per frictiones accelerato motu in iisdem, major copia sanguinis derivetur versus aortum, ubi in iliacas dividitur, adeoque & magis tunc urgeantur uter. vasa ; sicque sperari possit, illorum extrema ita dilatari posse, et menstruum fluorem dimittant.

Simul notandum est, practicis observatis constare, calorem pedum prodesse menstruantibus ; frigus autem nocere ; imo quandoque subito menstrua supprimi, si admodum frigescent pedes ; quod sæpius observavi ; præcipue si pavimento marmoreo frigido pedibus insistant diu. Solent enim ab hac causa sola, contractis spasmodice intestinis,

X

dolores

(1) Tab. xiii.

dolores colici oriri molestissimi, in quibus magnum levamen sentitur, si pedes incaluerint, imprimis per frictiones. Omnia enim abdominis viscera male afficiuntur, dum pedes intense frigent; adeoque mirum non est, & uteri vasa stringi, sicque supprimi, fluorem menstruum..

The experiment mentioned by the first author, is a clear and satisfactory illustration of the effect of *heat* on the human body; and the practical observations of the latter, as appears by the above quotation, as sufficiently demonstrate the action of *cold*, in constringing the vessels of the uterus, and suppressing the menses, even when applied to the feet only; from whence I would propose the following question; *viz.* If the *topical application of cold* to the feet, has been found to put an immediate stop to an habitual discharge of blood from the uterus, in opposition to the powerful efforts of nature; is there not the greatest reason to believe, that the same application would prove singularly efficacious,

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efficacious, either in restraining, or totally taking away that *hæmorrhage* from the womb which is preternatural ?

Heat not only relaxes the solids and dissolves the fluids, as may be seen by its effects on those animal substances, called jellies and glue, but also rarefies the air contained in the body, by which the whole mass will be expanded ; and by taking up more space in the vessels, their diameters will be enlarged, which will lay additional stress upon the solid system ; so that the effects of rarefaction and plethora, pro tempore, will be the same. *Cold*, on the contrary, condenses air, and confirms the blood's texture, for even the hardest metals, as appears by the *pyrometer*, are contracted, or expanded according to the degrees of heat or cold applied.

From these circumstances, but chiefly from *repeated experience*, I would infer that the application of *intense cold* to the body, is more to be depended upon, and will pro-

duce more salutary effects in *uterine hæmorrhages*, than any thing else which can be devised ; although I foresee an objection, which I could wish to obviate before I go farther. As cold affects the body by contracting the solids, and repelling blood to the interior parts ; it may be said that its action will be equally pernicious with that of *styptics* : The fact seems to be this ; when the body is heated, the circulating power is increased, and the blood is rarefied and rendered more fluid, but its vessels being dilated, if they at last give way, will then discharge their contents more freely ; but when it is suddenly chilled, although the application of *cold* may contract and lessen the capacity of its vessels ; it condenses the blood at the same time, so that in effect, they will not become fuller than before ; besides, as I have always observed, that the flux of blood abated in proportion to the degree of cold ; experience, which ought to supersede all theory, shows

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shews that the effect of cold in condensing the fluids, is more than equal to its power in contracting the solids; or at least, that the danger already hinted is not to be feared.

Floodings which are attended with frequent and long continued *fainting fits*, often prove mortal; yet I have observed in some of those where the pulse was weak and intermitting, and who were apparently sinking very fast; that by frequently admitting fresh, cold air, they recovered, as if inspired with new life. This does not seem difficult to account for, as the heart has not power to propel its blood through the pulmonary arteries, till the lungs are sufficiently blown up with cold air; which, on account of its greater gravity, is much fitter for the purposes of respiration, than the inelastic, confined atmosphere of a warm bed chamber.

In *August*, 1773, I received a letter from a gentleman at Kirby-Lonsdale, in Westmoreland, of which the following is an ab-

tract. "I had lately an opportunity of seeing the good effects of *cold* in a flooding after delivery; the particulars of which are as follows. About a month ago, I was called to a woman in labor with her fifth child, at a village a few miles from this town: The labor was natural, and in a short time the placenta came away with ease. About half an hour after, I took a walk in the fields, but was called in great haste, and at my return found her fainting and flooding very profusely. On enquiry, I was informed the women had given her a large quantity of spirits, to which I imputed the discharge. I threw open the door and windows of the room, for the free admission of air, and gave her *cold water plentifully to drink*; by means of which the flooding almost immediately abated without any return."

A gentleman who practices midwifery in London communicated to me the following case:

November

November the 11th, 1773, a patient of mine was seized with a profuse flooding and fainting, about half an hour after delivery: To the best of my knowledge, she lost about *three pints of blood*. I immediately let in cold fresh air upon her, by opening the doors and windows ; *and gave her two glasses of cold water to drink* ; having no vinegar at hand, I applied thick cloths, dipped in cold water, round her loins, over the lower part of the abdomen, and to the vagina : The good effect was evident, for the flooding very soon ceased ; in about twenty minutes the patient became sensible, and in a voice scarcely to be understood, desired she might be covered with cloaths, for she was dying ; as she seemed to be very cold, and was in a kind of shivering-fit, I complied with her request, but soon found my error in so doing ; for when she became warm, the flooding returned, which obliged me to have recourse to my former method, and to apply cloths wetted with vinegar, which by this time

was procured; in consequence of which, the discharge of blood again abated in a very short time, and my patient happily recovered without any relapse.

Every one who breathes with difficulty, can tell from his own experience, what vast relief he finds in going from a hot room, where the air is too much rarefied, into one much cooler, where it is more elastic and pure. The frequency of a natural pulse to the act of respiration, is in general as *two to three*; and the last is found to have a very sensible effect on the first, both as to its strength and quickness. Besides, as a considerable part of the whole mass of blood is continually passing through the lungs; successive draughts of that *cold fluid*, constantly applied to their interior surface, will contribute greatly to cool and condense it; as nothing but the membranous expansion of air vessels is interposed; and as air in the blood, will, by alternate changes
always

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always remain in *equilibrio* with that of the common atmosphere.

From such a rarefaction of air, the vessels of animals placed in the exhausted receiver of an air-pump, will swell and even burst; and upon the same principle, periodical pains, and fluxes of blood sometimes happen at full and new moon, when the atmospherical pressure on the surface of the body is greatly diminished. Those of delicate habits, like so many *living barometers*, feel the influence of the same cause, and become weather-wise, on the approach of high winds or sudden falls of rain.

According to *Arbutnot*, the internal surface of the lungs is greater in its extent, than all that part of the skin exposed to air; and therefore, the large quantity of this fluid received by inspiration, added to that externally applied to the body, will have very great effect in condensing the mass of blood, and reducing it into a smaller space,

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so as to lessen the distension of its vessels; and consequently, will not only tend to secure the patient from danger of a syncope, but will also abate the flooding.

Next to the free and unlimited use of cold air, with the application of compresses dipped in cold vinegar, to the belly and loins; I have often, according to the practice of *Hoffman*, directed large and repeated draughts of *spring water*, with remarkable good success; for, out of upwards of three thousand women delivered in the *Westminster Lying-In-Hospital*, several of whom were seized with floodings, both before and after delivery, only two of them failed under this treatment; as far as it was prudent to trust to it, or any other means, independent of delivery itself.

When the patient is very weak and much exhausted, beef-water or weak broth taken cold, will be more proper than water; and where the last is directed, it will be necessary to tincture it with *syrup of red*

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red poppies, or something of the like kind, to give it a medicinal appearance, which will render it more acceptable: But, if notwithstanding, the flooding becomes so profuse as suddenly to endanger life; her *feet and legs should be plunged into cold water*, and may remain there as long as they are sensibly affected by the cold; after which, they should be taken out for a few minutes, and then immersed again. Clysters of beef water may also be injected cold, and repeated as occasion requires.

So long as strength continues, and the pulse remains good, it will not be necessary to proceed to the delivery with violence, but wait, at least for a time, that the os uteri may relax and dilate by the effect of pains; always remembering that the indication of danger is rather to be taken from the nature of the symptoms than the quantity of blood; as it is incredible how much some have lost and yet survived; whilst others will sink
under

under a very inconsiderable discharge. *Mauriceau* remarks, that where the orifice of the womb was soft, thin, and equal, the patient generally recovered; but if the contrary, she often died; *Peu*, in his practice of midwifery, seems to be of the same opinion, and is so sensible of the great danger of applying violent force to dilate the os uteri, that he pronounces it death to the patient, from his own experience*.

Delicate women, who have lax fibres, of all others, sustain loss of blood with most danger, being extremely apt to faint, and are subject to violent head-ach. In such habits, especially after delivery, and in cases of extreme weakness, *hart/-born jellies*, with rhenish wine, and those things which give nourishment to the body, and consistence to the blood, may be advantageously directed: A strong infusion

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sion of the *cortex* with cinnamon, in French claret, will also make a very grateful and generous cordial, without heating the body.

In long-continued fainting-fits, where there was danger of a total stagnation of blood, I have sometimes directed the following volatile liniment with advantage, to be rubbed upon the pit of the stomach, in quantity of a tea spoonful; over which, a hot flannel should afterwards be immediately applied.

R.

Ol. amygd. ʒ iſs

Spt. volat. aromat. ʒ iij misce & fiat linimentum.

The symptoms of immediate danger are principally these; viz. the eyes grow dim, and the extremities cold; the pulse becomes weak and intermitting, and the patient frequently faints; cold sweats, with subsultus tendinum, or convulsions
succeed

succeed, and the hiccough is generally the last fatal symptom, which shews that death is near.

But notwithstanding some of those alarming signs, for they seldom all appear, as delivery is the only remedy which can give the patient a chance for life; no one who is truly sensible of the duties of his profession, will timorously desert her in the time of her utmost need, but deliberately follow the rules of practice, and speedily endeavour to perform that by *Art*, which *Nature* is unable to accomplish; without regard to the prejudices of the ignorant vulgar, or that undeserved censure which so frequently follows, where the event is fatal.

Whenever speedy delivery becomes absolutely necessary, it should be attempted without delay, even during the *fainting fits*; for although such proceeding may seem to carry with it the appearance of cruelty;

cruelty ; the general relaxation of body which then prevails, will render the uterus more torpid and inactive, and less liable to be stimulated into motion by the hand of the operator ; consequently, as there will be more space for turning the child, both it and the mother will suffer proportionably less : Indeed, her loss of strength will concur in making his assistance more effectual ; the uterus being then, as it were, unbraced and void of contraction : This shews the folly and imprudence of those, who are ever teasing and persecuting the poor, languishing, and half-dead patient, with their impertinent admonitions ; “ to bear down strongly, and make the best of her labor pains.”

In short, in all floodings which happen where the *fœtus still remains in utero* ; when every other method has failed, and the danger is great ; the patient, if possible, should be *speedily delivered* ; and whenever

a profuse hæmorrhage happens *after delivery*, and obstinately continues notwithstanding the use of the remedies already mentioned ; it will then become necessary to throw up *styptic injections* into the uterus, as the last and most powerful application that can be tried for her relief.

I have been more particular on this my *New Method of treating Uterine Hæmorrhages* by the action of *cold* externally and internally applied to the human body, being convinced, by *repeated experience*, that from thence, the lives of many women may be saved, who would be lost by being treated in the usual manner.

I did propose to make some experiments, in order to ascertain the different quantities of blood escaping from the vessels of wounded animals, exposed to different degrees of *heat* and *cold*; but want of opportunity, as well as the cruelty attending such enquiries, have hitherto prevented me.

Besides

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Besides the hæmorrhages incident to pregnant women, there are two other sorts which occur more rarely, and not attended with so much immediate danger; the first may happen to *virgins*, the last to women about the disappearance of the menses.

According to *Lamotte*, those floodings to which young women are subject, arise chiefly from *plethora*, and if the uterus is in a sound state, are generally remedied by bleeding, laxatives, and abstemious diet. In such cases, we should be cautious not to injure the patient's reputation from the suggestion that she is with child, and that such a flux of blood denotes miscarriage, which sometimes has inadvertently been done.

The menstrual flux, which now and then continues in plethoric habits, for the first three or four months of pregnancy, and also that discharge of blood which naturally happens after delivery, from the separation

of the placenta, should be carefully distinguished from a real flooding, by those who are unexperienced, or who from want of attention rather than judgment, might chance to fall into mistakes of this kind.

Women about the age of forty-five or fifty, are sometimes subject to a discharge of grumous, foetid blood, especially those of plethoric habits, who are sedentary, and indulge themselves to excess in eating and drinking.

Dr. *Amb. Dawson*, formerly an eminent physician of extensive practice in London, assures me, that he has often given *cremor. tart.* in such hæmorrhages with remarkable success.

When the female constitution continues to generate redundant blood beyond the stated time of nature, and where the uterine vessels, from the effect of age, become rigid and compact too early, so as to prevent its passing off that way, great inconveniences to health are the consequences of
it,

its, though in general, they may either be relieved or cured by bleeding and evacuations: However, when such complaints are of long continuance, attended with low fever, a sanious discharge, and painful forcing down of the affected part, they almost certainly denote a diseased uterus, and frequently prove mortal in the conclusion.

As for the *extract. cicuta*, its effects in such cases have by no means equalled my expectation, considering the extravagant encomiums with which it was ushered into practice. The *vegeto-mineral water* recommended by *Goulard*, may be tried as an injection; and *opiates*, after gentle evacuations, where the pain is violent, may be directed to advantage. I have observed very sensible, and good effects from the use of *Peruvian bark* in the following form, though a perfect cure is not always to be expected.

R

Cort. Peruv. subtilis. Pulv. ʒ i

Cremor. Tart. ʒ iii

Pulp. Tamarind. ʒ ss

Y 2

Syr.

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*Syr. caryoph. rub. q. s. ut fiat elect. cujus su-
mat. quant. nucis moschat. nocteq. Mane.*

Vegetable diet, with nourishment of easy digestion, and moderate exercise in pure air, with the chalybeate waters of *Tunbridge* or *Spa*, will likewise promote the cure; or at least will tend to abate the severity of the symptoms, and prolong the patient's life.

SECTION.

SECTION VI.

*Of Convulsions, and Acute Diseases in general,
most fatal to Women during the State of Preg-
nancy.*

THE cause of convulsions is often seated in the *brain*, or such parts as have immediate intercourse with it, by mediation of the nerves, particularly the *stomach* and *uterus*. They may also arise from violent affections of mind, and likewise from *plethora*, or *inanition*. There are other more remote causes of this disease, viz. the suppression of some long-accustomed discharge, as eruptions repelled from the bodily surface; the stoppage of bleeding piles; or application of any painful stimulus to the nervous parts.

Convulsions are either *idiopathic* or *symp-
tomatic*; the first are owing to some morbid impression originally made on the *brain* or

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genus nervosum, and when derived from the parent, are termed *hereditary*: The last arise from accidental causes which act suddenly on the nerves, and with more violence than their natural structure can bear. Those which are hereditary or habitual, and which continue after puberty, are generally incurable, though seldom mortal; and when they totally disappear about that period; it seems owing to a gradual change produced in the body, by the effect of age, which lessens its irritability, and gives more strength and firmness to the whole solid system.

A remarkable alteration is likewise brought about in the female habit, towards the first eruption of menses; for at this time, convulsions have been known to cease, which before had resisted the most efficacious remedies.

Hysterical women, from delicacy of habit, and the great irritability of their nerves, are, of all others, the most subject to

to this malady, especially during the latter end of their *first pregnancy*. This probably arises from the uncommon pressure of the gravid uterus on the abdominal viscera, which may obstruct their vessels, and prevent the free circulation of blood; or else from the vast distension of uterine fibres, which creates pain, and by nervous sympathy, throws the whole vascular system into a convulsive spasm. But that this violent and unaecustomed stress laid on the uterus, by the increased bulk of the child, is not alone sufficient to produce the disease is evident; seeing, that gravid women in general are not subject to it; and therefore, the *original cause* must have pre-existed in the constitution either from some former injury done to the *brain*, or a morbid impression derived from the parent, which remains dormant and inactive, until excited into motion by such change as that arising from pregnancy.

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As the causes of convulsions are various, so likewise is the intention of cure. The vessels of the body can neither be filled or emptied beyond a certain degree, without occasioning *plethora* in one case, and *inanition* in the other, both which extremes are destructive to health, and may occasion convulsions. In the first, they arise from painful distension of the nervous parts; and in the last, from a defect of the circulating power, and that equal distribution of blood, which is necessary to carry on the several secretions.

Convulsions from *inanition*, are much more dangerous than those from *plethora*; as it is easier to empty than replenish the vessels; for, although nourishment may be taken into the stomach; it is a considerable time before it can be converted into blood, especially where the assimilating powers of the body have been much impaired.

When this disease comes on after profuse bleedings, or other immoderate evacuations,

it

it is generally mortal; and it may be observed that slaughtered animals, having lost a certain quantity of blood, fall into convulsions a short time before death. *Van Swieten* supposes, that this is owing to the uniform pressure of the blood vessels being suddenly taken off from the brain; but more probably, it happens because that equilibrium or balance is destroyed, which ought to subsist between the solids and fluids; and therefore as soon as the quantity and impulse of blood on its containing vessels become deficient; the vascular system, for want of due resistance, begins to exert a kind of preternatural contractive power, and the whole bodily frame is agitated or convulsed.

But notwithstanding what has been said; the above author relates the following extraordinary case, where the patient recovered.*

Novi gravidam, quæ placidissime dormiverat, dum in vicinia periculosum erat incendium: Sollicita mater, mane accurrens, gratulabatur filię, quod blandus somnus omnem timorem arcuisset.

Mox

* *Van Swieten*, Comment. Vol. iv. p. 497.

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*Mox incipit membra misera toto corpore, & angī,
simulque totus lectus jam inundabatur sanguine,
sequente animi obliquo, & convulsionibus; tamen
in periculosa hac Uteri Hemorrhagia convalescit,
& a fetum quadrimestrem abortiens perdidit.*

Medicines, in such cases, are in a manner
out of the question; for nothing will so ef-
fectually restore strength, as the repeat-
ed use of nourishing fluids, in small quan-
tities: Broth clysters may also be admini-
stered; and if the pulse should remain very
weak and languid; a decoction of *Peruvian
bark* may be given, with warm nervous
cordials, joined with an *opiate*, such as the
confect. paulin. &c. Where the symptoms
are urgent, and the circulation almost at a
stand; *blisters* may be applied to inside
of the arms, and sinapisms to the soles of
the feet; the extremities may also be
rubbed with hot flannels, or immersed in
warm water, the effect of which, has already
been considered.

When

When convulsions arise from *plethora*, which chiefly happens to such as are young, who indulge their appetite, and have a strong digestion; the pulse is generally hard, full, and frequent, which will require the immediate and repeated loss of blood, with the use of laxative medicines and plentiful dilution. The *saline draughts* with *nitre* may be given, and the patient should be enjoined to use light and abstemious diet, for fear of a relapse.

When she is comatose during the intervals, and her head affected, the eyes being prominent and blood-shot, attended with delirium, or much fever; the use of *opiates* are improper: In short, they ought not to be given, except in cases of great urgency from pain or want of sleep, and even then, only after bleeding and evacuations.

It is of the utmost consequence to distinguish the true cause of convulsions, before any medicines are prescribed, or methods tried for the patient's relief; as an error of judgment

judgment might here prove of fatal consequence: For instance, copious bleeding, which would relieve or cure convulsions arising from *plenitude*, would instantly destroy the patient, if they were brought on by *induration*; and *emetics*, which would be proper when the stomach was loaded with bile or other noxious humors, would be highly pernicious, where they were occasioned by ardent fever, or *inflammation of the brain*.

Those of strong, robust constitutions, are seldom subject to convulsions, except from violent causes; on the contrary, children, and women of delicate habits, are sometimes affected by the slightest impressions on the body or mind; and it is remarkable, that what produces very extraordinary and alarming symptoms in one, will not at all endanger another; each feeling the effects of different causes, according to their natural temperament, and as their nerves are strung to different sensations. But although women and children are more subject to this

disease

disease than men, in proportion as their habit is weak and irritable, it is observed that they escape the danger of it much better.

Convulsions supervening violent fevers, or inflammation of the brain, are often mortal; but those which are followed by fever, critical eruptions on the body, or a discharge of putrid bile from the stomach or intestines, generally end more favorably. If they are of the hysterical kind, unattended by *coma*, *delirium* or *fever*, and attack the patient, by long intervals, so as to become habitual, they do not denote immediate danger; but sometimes occasion palsy, loss of memory, or idiotism, by gradually impairing the vital functions.

When this disease is suddenly produced by *terror*; *bleeding*, the liberal use of *opiates*, and *warm bath*, by dissolving the spasm and soothing the nerves, will best answer the intention of cure.

for when a vein is opened, though it is not necessary to bleed much, the action of blood through it is so powerful, that it will

I attended a lady in the year 1776, who was repeatedly attacked with convulsions during pregnancy, which were first owing to a fright, and to which she had been subject many years; being treated in the manner just mentioned, she went on the full time of her pregnancy, and being happily delivered, recovered without any relapse.

Some authors recommend bleeding in the foot, when the head is affected; but the doctrine of *derivation* and *revulsion*, as applied to bleeding, is not less inconsistent and irrational, than in what it relates to the *pediluvium* or warm bath for the feet. Opening a vein in the foot, has been said to bring on the menses; when blood drawn from the arm, had no such effect; and this was supposed to happen in consequence of its accelerating the blood's motion through the vessels of the legs and *uterus*, which indeed is a downright contradiction; for when a vein is opened in any part, the motion of blood through it, *pro tempore*, will
rather

rather be retarded than increased; as it is evident that the *bleeding orifice* cannot possibly transmit so much blood as the trunk of the vein, before its compression by the ligature. Admitting this as a fact, it will follow, that if menses have been suddenly brought on by bleeding in the foot, the effect was produced in a manner directly contrary to what has generally been imagined, viz. from compression of the veins and arteries by the *ligature* applied, and to *immersion* of the feet in hot water, both which, as already remarked, increase the quantity and velocity of blood passing through the *uterus**.

Errors in diet, or food taken into the stomach which offends in quantity and quality, have been known to occasion convulsions; but these are seldom dangerous, and generally cease, as soon as the offending matter

* Page 258, et seq.

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matter is evacuated, by giving an *emetic* and laxatives; after which an opiate will be proper.

Retention of Urine, by distending the bladder and creating violent pain, may likewise be productive of convulsions, especially in weak, irritable habits; but here, as in the former case, they soon go off, after it has been emptied by the *catheter*; otherwise, a warm bath should be directed, with emulsions and anodyne clysters.

When the neck of the urinary bladder is compressed by the child's head, it may be gently raised above the symphysis of the pubes: A case of this kind, is mentioned in *Lamotte's* observations, where, from such assistance only, a large quantity of urine was instantly discharged.

A patient at the *Westminster Lying-In Hospital*, about two years ago, in the time of labor, complained of excessive pain at the pubes, which she was not able to endure without

without crying aloud: She was seized with *tubfultus tendinum*, which occasioned the Matron to fend for me: I found the bladder distended with water, and raised above the brim of the pelvis, so that during her labor pains it was violently compressed between the uterus and bones, even to the danger of bursting; I directed the water immediately to be drawn off by the *catheter*, after which she became easy, and was delivered soon after.

Another case of the like kind happened at the *Hospital* lately; where the bladder, by its hardness and projection over the pubes in the time of labor, was at first mistaken for the child's head: This patient was treated in the same manner as the former, and also recovered.

Where *cutaneous eruptions* are suddenly thrown back into the habit; the *warm bath*, and gentle *diaphoretics* with nitre, will bid fair to relieve the patient: but should her complaints arise from *worms*; anthelmin-

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tic medicines may be given, in which, *Plenck's* preparation of mercury, with gum arabic, is both efficacious and safe, if administered with due caution. The *Indian Pink Root*; the bark of the wild cabbage or *bulge water tree* of Jamaica; and the *cabbage*, the pods of which are lined with the *siliqua hirsuta* of *Linnaeus*, have all lately been recommended as powerful medicines for this purpose; but I cannot say much of them from my own experience, except the *Indian Pink Root*, an infusion of which, is both elegant and efficacious.

In strong *convulsions* during pregnancy, speedy delivery has been proposed, and resorted to as the principal remedy: but observation and experience shew, that this rule will admit of many exceptions, and ought to be regarded with great caution; especially by those who are young in practice, and therefore influenced by fear, which naturally suggests the worst; in consequence of which, they are often prompted to

to proceed with more haste and violence than is consistent with the patient's safety.

It has already been remarked, that simple pressure of the *gravid uterus* on the contiguous viscera may interrupt the natural functions of those parts, and occasion convulsions; and to such cases, may be added those where that part is defective in its organical structure; and being either too small, or preternaturally firm and compact, cannot yield sufficiently to the increased bulk of the child, without being violently distended and overstrained; or else by an unfavorable position of the foetus, it may be compressed and bruised between the angular parts of its body and bones of the pelvis, so as to excite pain, and bring on convulsions; especially, as the habit is at this time uncommonly irritable. Under such circumstances speedy delivery, if the patient is at, or near her full time, may procure her instant relief; but on the contrary, whenever they arise from any cause

independent of the state of pregnancy; experience, as well as reason, evidently shew, that delivery thus violently brought about, contrary to the common course of nature, would not only prove ineffectual, but highly dangerous.

Hoffman supposes that the *duodenum* is often the seat of convulsions, because of the discharge of bile and pancreatic juice, into the cavity of that intestine; which from various causes are wont to become putrid and highly acrimonious; consequently, they may produce great pain and tumult in the body, if not soon evacuated by gentle cathartics.

The retention of these *acrimonious salts* and *rancid oils* which naturally ought to pass off by the kidneys, may likewise occasion this malady; as it has sometimes been observed to succeed a flux of pale, limpid urine, especially in fevers: In such cases, small portions of *emetic tartar*, with the saline draughts, or other saponaceous fluids have been found to procure relief.

Besides

Besides the several causes of convulsive disorders already enumerated, there may be others, so latent and difficult to be found out, as to remain imperceptible to the nicest observer; which nevertheless act with great violence on the sensible and irritable parts of human bodies. In such doubtful cases, or where the patient is senseless and can give no information; the indication of cure must be taken from the general methods of treating the disease, and the precipitate administration of powerful medicines ought to be avoided; for he that is afraid of mistaking his way, should rather abate than redouble his speed. If the patient is unable to swallow, which frequently happens, she should not be neglected on that account; since *opium*, *musk*, or other medicines may be advantageously given in clysters.

Women who have been subject to the disease, in former pregnancy, should use every possible caution to avoid it; by

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bleeding, the use of opiates, or such other medicines or methods, as seem best appropriated to the nature of their constitution, before the approach of labor.

The violence, and long duration of convulsions, sometimes leave a morbid impression on the brain or nerves, by which the intellectual faculties are much impaired. In such cases, blisters, preparations of bark, with aromatic bitters, or the warm foetid gums, have been found serviceable; also chalybeate waters; the cold bath, and moderate exercise, in a dry, pure air,

Pulv. subtiliss. Cort. Peruv. ʒi

—radic. Valerian. Sybo. ʒiij

Chalyb. rubig. preparat.

Spec. Aromat. aa ʒi

Syr. Caryoph. rub. q. s. ut fiat Elect. cuius sumat quant. Nucis moschat. bis terve in die, superbibend. Cyath. Aq. Pyrmont. vel Spaldan.

All

All animal and vegetable substances, which are usually directed in spasmodic complaints, act by their powerful effluvia, and in a certain degree seem to produce a narcotic effect : among the first are musk, and castor : and of the last are gum assafoetida, sagap, camphor, valerian, &c. but *opium*, where-ever it can be properly given, is the sovereign medicine, and superior to all the rest.

Here it is necessary to caution young practitioners, who are generally *enthusiasts* in physic, not to imagine that the names of medicines, or the class to which they belong, either sufficiently denote their true qualities or point out their real use : They ought not therefore, to depend upon them too much, however dignified with the appellation of *antispasmodics*, *specifics*, &c. many of them have not even power enough to do harm ; which indeed is saying something in their favor ; since those which are good, are often abused, and then become the worst of all.

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The means of making remedies salutary, consist in distinguishing properly how they are to be applied: Thus administered, there is much which they will do, but much more which it is impossible they should do, from the very nature of things; and which therefore, it would be unphilosophical as well as unreasonable to expect.

I was favored with the following case by Mr. M——n, the gentleman who attended and delivered the patient; and have set it down, as near as possible, in his own words.

C A S E I.

Mrs. D——an, of *Swallow-street*, aged thirty, at her full time, and with her first child, was seized on the 24th of *January*, 1764, with violent and universal convulsions, in the beginning of labor, whilst her pains were moderate, attended with

with total deprivation of her senses: Being of a plethoric habit, twelve or fourteen ounces of blood were immediately taken from the arm; a blister was applied to the back, and the usual antispasmodic medicines administered, but without any sensible benefit; the convulsions increased in frequency and violence; recurring every five or six minutes, without any intervals of respite: At the accession of every fit, the child's head was pressed down on the os uteri, as if a labor pain had been coming on; it then grew rigid, and the agitation of the whole body was so violent, that there was no possibility of obtaining any farther information from the touch: In the mean time the arm, from struggling, bled to the quantity of ten or twelve ounces more, but no faintings ensued. In this manner, when about eight hours had elapsed, and no symptoms of amendment appeared; it was proposed to bring the child away by instruments, and for the satisfaction of her friends

and

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and the preservation of the attendant's character, to request Dr. *Leake's* advice; and that he would be present during the operation; but as his residence was distant, and the first messenger had mistaken the street, upwards of an hour was lost, before he was apprised of it; and in the mean time, the *convulsions* increased to such a degree, that her death was every moment expected. In the intervals, which were now very short, no pulse was to be felt, nor could she be perceived to breathe: Her attendant therefore thinking that farther delay might be fatal, resolved not to wait any longer, but proceed to the operation. During the recess of the convulsions, he could perceive the os uteri was dilated to a considerable extent, and the head advanced below the brim of the pelvis: After repeated trials with the *short forceps*, finding he could not succeed, on account of the height and largeness of the head, and the insufficient dilation of the os uteri; he introduced

introduced the *scissars*, perforated the skull, and after evacuating its contents, extracted the bones of the head; and then delivered her without much difficulty. Just as the operation was finished, Dr. *Leake* arrived, and seeing the state of the patient, confirmed the unfavorable prognostic which her attendant had before made; However, thinking it better to try the effect of doubtful remedies than none, he prescribed for her as follows.

R.

Puls. e Myrrh. c. ʒj

Mosch.

Sal. Succin. aa ʒss

*Syr. e Cort. Aurant. q. s. ut fiat Bolus
4to quaq. hora sumend. cum Cyath. Julep.
sequent.*

R.

Julep. e Camphor. ʒ viij

Spt. Volat. fetid. ʒ ij misce.

Sinapisms were also directed to be applied to the soles of the feet.

On

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On the third day from her delivery, she began gradually to return to her senses, as if waking out of a dream; but had not the least recollection of any thing that had happened, or of any pain she felt since the time her *Accoucheur* first entered the room. In a fortnight she perfectly recovered, and since that time has had several children.

C A S E II.

August the 6th, 1765, I was sent for to see a gentlewoman at *Camberwell*, who was convulsed; she was big with the first child, and at the full expiration of her reckoning; her midwife was with her, and informed me she had no labor-pains, the *os uteri* not being at all dilated. She was apparently of a strong habit of body, and had been remarkably healthy during the latter end of pregnancy: The fits, two in number, which had been violent, were gone off before I saw her: Her pulse was good, and she was perfectly sensible, but could give no man-

ner

ner of reason for her complaint. I ordered twelve ounces of blood to be drawn, and a cathartic clyster to be administered; after which, she took a bolus, with *musk* and *opium*, and washed it down with the saline mixture. When I saw her next day, in the afternoon, she seemed in a manner quite recovered; but had only taken her medicines once. She was delivered two days after, and did well.

C A S E III.

October the 28th, 1769, late at night, I was desired to visit Mrs. *A—d—n*, in *Cavendish-Square*, who was suddenly attacked with convulsions, the third day after delivery, without any apparent cause: She was naturally of a very chearful, volatile disposition, but subject to a *nervous tremor* on the slightest occasion. The convulsive spasms were gone off before I got there; but her voice was tremulous and indistinct, her eyes wild and staring, and her intellect very imperfect;

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perfect; she swallowed with great difficulty, and her face was much altered from its former appearance: Her pulse was frequent, weak, and unequal; sometimes vibrating with uncommon velocity, and then suddenly intermitting, and becoming almost imperceptible, for the space of one or two pulsations. Her friends did not know she had been disturbed, nor could I find by the nurse, that any thing had been given to eat or drink which disagreed with her; but as I had attended her before, and found that opiates generally relieved her, I prescribed the following medicines.

R.

Pil. e Styrace gr. vj

Pulv. Castor. r. ℞ss

Balsam. Peruv. q. s. ut fiat bolus minim. pro re nata exhibend. cum cochlear. duobus Julepi sequentis.

R. *Julep. e Camphor. ℥v*

Aq. Puleg simp. ℥iij

Spi. Volat. fetid. ℥ij fiat Julepum.

Before

Before seven in the evening, she had taken two boluses, and having had some refreshing sleep, waked sensible and seemed better; when I saw her at that time, her pulse was more full and strong; and as there appeared no signs of relapse, the application of a blister was omitted, to which she seemed much averse: I desired that three spoonful of the *Julep* might now be given occasionally, without the bolus; except she was threatened with convulsions.

Next morning she was still better, having passed a good night: In the evening she complained of pain at her stomach, but was free from feverish symptoms, and perspired gently. The *emplast. stomachic.* was directed to the pit of her stomach; her feet were wrapped in hot flannels, and the use of the *julep* was omitted. She now continued recovering every day, but towards the end of the month, being subject to night sweats; she took a decoction of the *cortex*, with *elix. vitriol. dulc.* which restored her to perfect health.

C A S E

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C A S E IV.

Sarah Silby, of a strong athletic habit, was delivered in the *Westminster Lying-In Hospital* the 26th of August, 1771. The labor was natural, and the placenta came away with ease about an hour after delivery, as I was informed by the gentleman who at that time attended the hospital; she appeared well as could be expected till nine in the evening, when she complained of great sickness and oppression at her stomach, and vomitted a large quantity of *poraceous bile*: As the sickness did not entirely go off, a grain of *emetic tartar* was directed to cleanse her stomach more thoroughly; but it did not produce any sensible effect. About midnight, she was attacked with violent *convulsions*, which lasted till eleven o'clock the next day; during which time she had ten or eleven fits, and twice or thrice threw up phlegm, mixed with clots of blood; but as she was senseless and

the

comatose in the intervals, it was not possible to administer any kind of medicine.

The 27th in the morning, her pulse was hard and oppressed, her skin hot and dry, and overspread with a deep yellow, as if she had been ill with the *jaundice*. The tongue was foul, and had been wounded by her teeth in the convulsive paroxysms; so that it appeared, the blood which she had discharged, did not proceed from her stomach, but only from her mouth: The abdomen was tense and swelled, and she breathed with much difficulty. Ten ounces of blood were immediately taken from the arm, and a *cathartic clyster* was afterwards administered. In the evening she was better; the clyster had procured her three stools, and lessened the hardness and swelling of her belly.

I then directed one of the following powders, to be taken every four hours, and an anodyne draught to be given the last thing at night.

A a

B. *Tart.*

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Rx.

Tart. emet. gr. iſs

*Magnes. alb. ʒ iſs contere & f. pulv. in ſex
portiones dividendus.*

Rx.

Aq. Rulæ. ʒ iſs

Spt. Volat. ſætid. ʒ ij

Tinct. Thebaïc. gu. xxx

*Syr. & Cort. Aurant. ʒj miſce & fiat
hauſtus.*

The 28th in the morning, ſhe was ſenſible and much relieved, her pulse was more ſoft and equal; the powders had brought on a free perſpiration, and the ſuffuſion of bile on her ſkin was leſs perceptible; The opiate had alſo procured her ſome refreshing ſleep, but as I obſerved her head was diſordered, and affected with *ſtupor*, leeches were directed to be applied to her temples in the evening.

29th. Better in all reſpects, and perfectly ſenſible, but complained of the foreneſs of her tongue, which was waſhed with ſage-tea and honey: In the evening, ſhe was feveriſh,
and

and had muscular pains in different parts of her body, but remained perfectly sensible. The antimonial powders were continued.

30th. The preceding night's rest, and a free perspiration, had remedied her yesterday's complaints : Nothing was now given but nourishing food of easy digestion, by which, her strength sensibly increased, and in a few days she perfectly recovered.

CASE V.

That part of the following case, which relates to the different circumstances of labor, I took from the minutes of one of my *Pupils*, who then attended in rotation and delivered the patient ; the rest is set down according to the best of my recollection.

Ann Philips, on *Thursday* morning, the 27th of *February*, 1772, about two o'clock, was brought into the *Hospital*, with symptoms of approaching labor ; the waters

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were discharged the preceding evening, but her pains were inconsiderable ; at last they became stronger, and returning by shorter intervals, brought the head below the brim of the pelvis, which was narrow ; about three o'clock in the afternoon, her pains were still more frequent, but of shorter duration ; notwithstanding, the head made some small advances, and continued to do so until about eight o'clock, when it was totally disengaged from the uterus, and the birth was expected at every pain. Her pulse was now strong, full and frequent, as it had continued during the day ; when, after changing the situation of her body, which was unfavorable, she seemed rather fatigued, and was suddenly seized with *convulsive spasms* in both legs, which quickly increased, and soon affected her whole body ; Her pulse, during the fit, was small and very quick ; she had seemingly great anxiety and oppression about the *præcordia*, and the urine was discharged insensibly ; The spasm continued

continued about ten minutes, when she was apparently quite recovered ; her pulse also grew stronger, but her pains were manifestly interrupted, and much weaker. The convulsions returned by intervals of near an hour, and were of long duration, 'till about twelve o'clock, when she was delivered. She was afterwards much better, but her fits again returned in half an hour with greater violence than ever ; her intellect, during the intervals, being also very imperfect.

Eight ounces of blood were taken away, and the following bolus directed to be given immediately after, and repeated as occasion should require :

R.

Extract. Thebaic. gr. iſs

Mofch. ʒſs

Confect. Alkerm. q. ſ. ut fiat bolus

She was strongly convulsed in the night ſeveral times, and by ſeven o'clock in the morning, had thirteen fits from the firſt

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attack; about nine she was better, but complained of much pain in her head, and soreness all over her body.

An emollient clyster was administered, and her temples were bathed with warm vinegar, the fumes of which, she also drew up her nose. Her head being affected, the opiate was omitted, but about nine at night, it was repeated, lest there should be a return of the convulsions. The next morning she was much better in all respects; had sound, refreshing sleep in the night, and perspired freely. From this time the symptoms of weakness gradually went off, and in a few days she perfectly recovered.

CASE VI.

I was favoured with the particulars of the following case, by Mr. H—, an apothecary in town, who practises midwifery, and at whose request I was sent for, at the time the patient was seized with convulsions.

Mrs.

Mrs. H—, the wife of a tradesman in *James-street, Covent Garden*; about thirty years of age, of a robust, plethoric habit, and perfectly healthy; being pregnant with her first child, was seized with *convulsions* at the expiration of her full time, and during labor, viz. the 10th of *March, 1772*: Her pulse was full, and her pains seemed natural, but so moderate, that she was not at first examined by the touch: In less than an hour, she was taken with retching without any apparent cause, and complained of pain at her stomach: A little warm caudle was given her, which was instantly thrown up; the pain at her stomach became violent and the vomiting increased; about half an hour after, she was seized with *strong convulsions*, which ceased by intervals; she vomitted with great violence, and several times threw up a large quantity of slimy fluid, mixed with blood.

During this time, there were no signs of labor, the *os uteri* being rigid and quite

closed: Every paroxysm was succeeded by a seeming profound sleep, attended with snoring, or rather snorting, with a discharge of foam from her mouth, mixed with blood. She was in this situation when I first saw her. Twelve ounces of blood were immediately taken away, a *blistering plaster* was applied to the nape of her neck, and *sinapisms* to the soles of her feet: I prescribed a bolus with *musk* and *opium*, which being dissolved, was swallowed with some difficulty. She continued speechless and insensible, as she had been from the first attack, but the convulsions left her, and the labor pains grew stronger; the *os uteri* then dilated, and the child advanced at every pain, insomuch that the birth was speedily expected: On a sudden, the pulse sunk, and her strength being perceived to lessen every moment; the child which was dead, was extracted by the *forceps*, and in about three hours after she expired.

I could not perceive that the tongue was wounded, as it frequently is in such cases; and therefore supposed that the blood discharged from her mouth, proceeded from a ruptured vessel in the stomach; otherwise an *emetic* would have been proper, since the vast quantity of glairy, *gastric fluid* thrown up, denoted something amiss in that part; which, like the urinary bladder, when irritated by a stone, or the intestines, when any painful stimulus is applied, separate the same kind of mucus in great abundance.

CASE VII.

August the 12th, 1772, at seven o'clock in the morning, I was desired, as soon as possible, to visit a gentlewoman at *Lambeth*, who was seized with convulsions, and supposed to be in labor. Her first midwife seeing the state she was in, and fearing, I suppose, she would die, pretended business elsewhere, and left her. The midwife
who

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who was afterwards sent for, being present, informed me her pains were inconsiderable, and that the *os uteri* was very little dilated. Her nails were black, and her arms had repeatedly been drawn up with great violence towards her body, as if affected with the *cramp*. She complained of intolerable pain in her bowels, and was much oppressed with wind at her stomach, which was tense and swelled; her pulse was frequent and irregular; and I was told she had long labored under great anxiety of mind and dejection of spirits, as well as bodily pain. Her extremities were ordered to be gently rubbed with warm cloths, and afterwards to be wrapped in hot flannels. I directed the following draught, and also an emollient clyster to be administered:

R.
Confect. cardiac. 3*ss*
Aq. Ment. pip. simp. 3*iss*
Nucis Moschat. 3*ij*
Tinct. Thebaic. gr. xx

Syr.

*Syr. e Mecon, ʒj fiat haustus anodyn,
quampimum exhibendus.*

As she continued in great pain, and some symptoms of *convulsive spasms* appearing in the evening; seven ounces of blood were taken away, and the anodyne draught was repeated: She discharged large quantities of wind from her stomach, and was so much relieved from pain, that she fell into a profound sleep, and was much better in all respects the next morning; after which her labor pains came on, and being happily delivered about one o'clock the same day, she soon perfectly recovered.

Dr. Gaubius, in his *Adversaria*, mentions the internal use of the flowers of zinc, and informs us that he directed them with success in the cure of *convulsive and spasmodic diseases*; but such is the almost infinite variety of causes from whence convulsions may proceed, that what will relieve or totally remove them in one, will not be found in the least beneficial to another; and I think

think it still remains for further experience to determine, whether their medicinal effects in such cases, are to be depended upon or not. Six grains of the flowers of zinc may be mixed with a dram of fine sugar, and being divided into six parts, one of them may be given thrice a-day, or oftener, as occasion requires.

NEXT to Uterine Hæmorrhages and Convulsions; the *Pleurisy*, *Dysentery* and *Small-Pox*, deserve attention, as diseases of a very destructive nature to women during pregnancy; But as they have been fully and judiciously considered by authors of the greatest eminence; I shall only take a cursory view of them, in order to shew how much their dangerous tendency is then increased; as well as to point out that peculiarity of treatment, which they at this time require.

As

As a firm and compact state of the solids are observed to produce *acute diseases*; so lax fibres and a delicate habit dispose the body to those of the *chronic kind*. Women, therefore, are found to be much less subject to *pleurisy* than men; and those who have a bad digestion and phlegmatic constitution, are seldom affected with it at all; according to that aphorism of *Hippocrates*: *Qui acidum eructant, raro pleuritici fiunt.*

Although strong masculine women who use hard exercise, and where the menses have been deficient, are much oftener visited with it than others; I have seen two or three instances, where those of a very contrary kind were also violently affected*. The production of the disease, and its symptoms, may therefore, probably sometimes arise from a defect of the *vis vitæ*, as well as from excess of it; for instance, when the quantity of animal fluids is much lessened, in valetudinary, exhausted women, so is their

* Vide *Child-bed Fever*, page 223.

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their strength likewise ; and consequently, four ounces of blood, which shall accidentally become redundant, will render such women as *plethoric*, and over-load their vessels, as much at one time, as double the quantity would have done at another, when they were stronger.

In the beginning of the disease, the pulse is commonly hard, full, and strong ; but when the pain in the sides becomes acute, and respiration very difficult, it then loses its firmness, and grows more soft and weak ; and as the blood cannot now pass through the lungs, they will begin to participate of the inflammation ; and the *pleurisy* will then be complicated with the *peripneumony*.

Without this distinction, and particular regard to alteration of the pulse ; *bleeding* would often be omitted, as improper, even when most conducive to the patient's safety, by preventing a *mortal suffocation* ; for she is often cut off by the difficulty of breathing, and the consequent obstruction of blood in
the

the lungs, before the inflammation has brought on any collection of matter in the thorax. The indication of cure, is therefore, rather to be taken from respiration, than the state of the pulse, which manifestly depends upon the former.

Servius who opened a great number of those who died of the pleurisy at Rome, always found one lobe of the lungs corrupted, but the pleura was either slightly affected, or altogether untouched by the inflammation.

In most acute fevers of the inflammatory kind; scarcely any thing is required, besides well-timed evacuations, with plentiful dilution; and therefore, bleeding, gentle laxatives, and the saline mixture with nitre, will here be proper; especially, when the skin is dry, and the pulse hard and full.

When the patient is much relieved in the beginning, by profuse perspiration, and the pulse becomes more soft and free; or

where

where she is benefited by expectoration in the progress of the disease ; bleeding does not seem necessary, but it may be advantageously directed at all times, whenever a dangerous difficulty of breathing suddenly comes on : Under these circumstances, it is safe and requisite in women with child as others ; and even more so, in those who are young, and naturally of a plethoric habit of body, and who are not advanced beyond the *fourth month of pregnancy*; for the *embryo* being then small, and not requiring the whole quantity of redundant blood ; nature often finds means to carry it off by the *vagina*, lest it should overfill the vessels, and injure the constitution.

Where expectoration is suppressed, and difficulty of breathing comes on ; *Baglivi* recommends the application of blisters to the inside of the legs, and also mentions the remarkable good effects of warm, diluting fluids, taken often and in small quantities.

For

For this purpose, nothing can be better calculated than the *decoct. pector.* with nitre; and if the steam of warm water is frequently drawn into the lungs with the breath, it will be found beneficial.

Where the pain is extremely acute during respiration; swathing or binding the thorax with a broad circular bandage; will often procure great relief, by preventing the elevation of the sternum, and distension of the affected parts; for then, breathing is principally carried on by a greater depression of the diaphragm, at each inspiration; but this would be highly improper in *gravid women*, where the whole abdominal cavity being taken up by the *enlarged uterus*, the motion of the lungs would, in a manner, be suppressed, and the patient suffocated. *Emetics*, for the same reason, should be omitted, or given with the greatest caution; especially in full habits, before bleeding, or where signs of *delirium* appear.

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To promote expectoration, either of the following medicines may be directed, according to the degree of inflammation, and nature of the symptoms :

Rx.

Ol. Lini per express. ʒ iij

Spt. Sal. ammoniac. gr. xx

Aq. Pulleg. simp. ʒ ijs

*Oxymel. Scillit. ʒj fiat haustus 5ta quaq.
hora sumendus.*

Rx.

Sal. Absinth. ʒ i

Succ. Limon. ʒ ss

Sperm. Ceti solut. ʒ ss

Aq. Hyssop. ʒ x

Syr. balsamic ʒ i fiat haustus.

The application of a blistering plaster to the affected part seems most rational after bleeding, &c. but where-ever the pain is fixed, and so acute, as to occasion much difficulty of breathing in the beginning; it may then be directed with great safety and advantage, as I have observed several times.

times. In short, the treatment of this disease in pregnant women, with some exceptions, is nearly the same as in those who are not so, although the event is much more dangerous; according to Hippocrates, viz. *Mulierem in utero gerentem, ab acuto aliquo morbo corripit, lethale.*

Mrs. M-y-les of Westminster, aged thirty-two, and of a weakly constitution; in the fourth month of her pregnancy, was seized with an acute, inflammatory fever, supposed to have been communicated by her husband, who was then recovering from a dangerous illness of the like kind, which had confined him to his room three weeks. I was desired to visit her the 21st of July, 1772: her pulse was frequent and somewhat full, her tongue fowly and thirst immoderate: she complained of head-ach, which had continued violent from the beginning, and prevented her having rest. Being ill near a week before I saw her, some medi-

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cines had been given, and a blister applied : As I was informed there were signs of intermission towards morning, I directed the following draught :

R.

Sal. Absinth. ℥i

Succ. Limon. ℥ss misce & affund.

Decoct. Peruv. Cort. ℥i

*Aq. Cinn. simp. ℥iij fiat haustus 4ta
quaq. hora exhibendus.*

Her complaints continued without much alteration the two following days ; but on the twenty-fourth her pulse was hard, the hands tremulous, and her eyes appeared bright and inflamed ; she was delirious by turns, and raved much in the night, which she passed without sleep. Eight ounces of blood were taken from the arm, and an emollient clyster was administered ; she afterwards took one of the following powders, which was ordered to be repeated in three hours, if the first produced no sensible effects.

R. Tart.

CONVULSIONS, &c. 381

R.

Tart. emet. gr. ij

*Magnes. alb. 3ss contere & fiat Pulv. in
sex partes dividend.*

The 25th, the febrile symptoms seemed to abate, and she was something better, having had refreshing sleep soon after bleeding, the preceding day: The powder first given proved gently emetic, and afterwards produced moisture on the skin; her pulse being softer; the draught, which was first prescribed, was again repeated every four or five hours,

On the 27th, she was still more cool and free from fever, but extremely weak and languid; and as the urine deposited copious sediment, I prescribed the following draught, and desired that weak broth, and light nourishment might be given as often as her stomach would bear.

B b 3

R. Infus

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R.

Infus. Peruv. Cort. Fortif. Confect. 3 ijs
Extract. ginsd. mall. 2 ijs
Spt. Lavend. c. 3 ijs
Confect. Alkerm. 3 ijs fiat haustus 4 q. quaterbo-
ra exhibendus.

She continued this medicine upwards of
a week, and gradually gaining strength
every day, at last perfectly recovered with-
out abortion.

A preternatural intestinal discharge is usu-
ally called *Diarrhea*, but when mixed
with blood, or attended with pain and
fever, it is then termed a *Dysentery* or
Bloody Flux. This disease may arise from
obstructed perspiration, corrupted food, or
strong, drastic purgatives. It may also be
communicated by infection, or brought on
by sharp humors, which vellicate the inte-

rior

CONVULSIONS, &c. 383

rior surface of the intestines, and determine the blood in too large a quantity to their tender vessels.

There have been some few instances where blood was observed to proceed from the intestines, without any pain or loss of strength; and where the suppression of this flux produced very dangerous symptoms, viz. vertigo, epilepsy, or even madness. It may therefore be reasonably supposed, that such evacuations were truly *critical*, and supplied the want of some other discharge; as that of bleeding piles, or perhaps the redundant blood, which is sometimes carried off by the vagina, in the first months of pregnancy. Where the stools are sanious and foetid, attended with pain, fever, and tenesmus; it would be equally improper to put an early stop to the discharge.

It is not difficult to distinguish between the hæmorrhoidal flux, and dysenteric blood; as the first is generally evacuated with inconsiderable pain, which is local and

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confined to the rectum; whereas, in dysentery, the pain is often very acute and universal: Besides, in the hæmorrhoids; the blood is voided first, but in the other disease, it is either mixed with fæces, or comes away afterwards by the efforts of straining.

When pain in the bowels is violent and excruciating, but not soon followed by stools, it may always be looked upon as a very *dangerous sign*, which shews that the small intestines are affected; and if the patient is not soon relieved, or particularly, if a difficulty of swallowing and hiccough come on; it denotes a *mortification*, and shews that death is at hand,

If the disease is long protracted, the intestines lose their retentive and absorbent power; and the food taken into the stomach instead of being converted into chyle, for the nourishment of the body, is hurried thro' the inflamed intestines; which being stripped of their mucus and excoriated, are affected with pain and *tormina*, from the acrimony

acrimony of their contents : Hence, as the blood is deprived of attemperating fluids, the secretion of *urine and perspiration* becomes defective, and the patient will be nearly in the same situation as one after long fasting; consequently, from the rancid acrimony prevailing in the body, this disease, towards its conclusion, like most others, will become of the putrid kind.

In this disordered state of the female habit, the *fetus in utero* being robbed of its nourishment will die; and the *placental vessels*, which from thence derive their energy and absorbing power, will now separate from the womb, like blighted fruit in vegetables, and the patient will miscarry.

Although the cause of this disease is different; the treatment of it is so similar to that of the obstinate diarrhoea attending *Child-Bed Fever*, that I shall not trouble the reader with a repetition of what is laid down on that subject; but only observe, in those cases where, from the patient's excessive

cessive pain, one might have been tempted to direct *opiates*, they have seldom procured lasting ease; especially in the early state of this disorder; but on the contrary, often increase the oppression at stomach and pain in the bowels, by lessening their expulsive motion, and locking up those corrupted, offending humors which ought to be carried off. Therefore, *laxative medicines* which pass without much irritation, with rice-water for common drink, and the frequent use of emollient clysters, or those made with starch; where the mucus of the intestines is abraded, will generally be found to afford relief.

Where the habit is plethoric, and much pain or fever attend; the cure should commence with the loss of blood; otherwise, it will not be absolutely necessary. Gentle emetics, such as the following, may then be given two or three times; by intervals of three or four days, as the strength will permit:

R. Tart.

CONVULSIONS, &c. 387

R

Tart. emet. gr. v.

Magnesi. alb. 3ss

Aq. Alex. simp. 3vi

*Oxymel. Scillet. 3ss fiat mistura cujus sumat
Cochlearia dup. oblata occasione.*

When the above medicine does not act as an emetic, it generally proves gently cathartic, or opens the cutaneous pores, which will be found greatly to assist in the cure; the sympathy between the skin and bowels being very remarkable; as may be observed in consumptive habits; for the habitual diarrhoea which then often attends is almost constantly better or worse, as the colliquative sweats are more or less profuse. During the intervals, either of the following medicines may be given twice a-day, or oftener, according to the nature of the symptoms, or violence of the discharge; and if the patient is much harrassed with pain, and can get no rest; thirty or forty drops of *thebaic tincture* may be occasionally added to the clyster :

R. Pulv.

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R.

Pulv. Rhei. gr. v.

Confect. cardiac. ʒ i fiat Bolus

R.

Pulv. Gall. Alep.

..... Nucis Moschat. aa ʒ ss

Syr. e Mecon. q. s. ut fiat Bolus.

When this disease is not attended with pain or fever, it then often arises from weakness and relaxation of the bowels; and therefore, opiates and mild astringents may be directed: The following bolus, or something of the like kind may be given twice a day, with a tea-cup full of *aq. calcis*, to which, milk may be added in the quantity of a third part. A flannel shift should also be worn next the skin, and the feet kept extremely warm.

R.

Pulv. e Succin. ʒ gr. x.

Confect. cardiac. ʒ i fiat Bolus.

A lady in Great Queen Street, near twenty one years of age, and of a very delicate habit

of

of body ; in the seventh month of pregnancy, was affected with a diarrhoea, from anxiety of mind. Though she took opiates and other medicines, it continued almost without intermission, till the middle of the eighth month ; when the pain in her bowels became very violent, and blood with mucus was discharged with the stools : She was oppressed with great sickness at stomach, and often threw up large quantities of ropy yellow phlegm, mixed with blood. She had very little appetite, or natural rest ; complained much of head-ach, and labored under a slow fever, and hectic heats, after taking the least nourishment : Her pulse was very languid and unequal ; in short, she was reduced to the last degree of weakness.

Opiates, which I at first directed, scarcely procured her any sleep or lasting ease, neither was the diarrhoea abated ; being constantly disturbed seven or eight times in the night, and during the twenty-four hours, had sometimes sixteen or eighteen motions,

motions, though at last, nothing was voided but a red, glairy substance, like flakes of half-putrified flesh. I then prescribed the following powders, one of which, she took in rice-water twice a-day. The first powder made her sick, but did not prove emetic, and although they always checked the looseness, it never totally went off till within a few days after delivery; at which time she was better in all respects, and free from pain:

R.

Tart. emet. gr. ʒ

*Pulv. Contrayer. s. ʒi fadule contere ʒ
fiat pulvis in sex partes dividendus.*

Starch clysters were administered, and her common drink was rice-water, with addition of gum arabic, which agreed with her better than any thing else.

After delivery, the purging commenced with as much violence as ever, attended with excruciating pain in her bowels; the stools being very foetid, and mixed with

blood

blood as before. The next day, her pain was still excessive, and the purging continued: Her nails began to turn black: she was seized with a shivering fit, and immediately fell into convulsions, which lasted upwards of an hour; her body being agitated at different times with great violence. As the fit went off, and she seemed better, I was not sent for till the eighth day, at which time the purging returned, and the acute pain in her bowels threw her into another fit, which for a time, deprived her of all sense. *October* the 17th, 1772, I directed starch clysters, with twenty drops of tinct. thebaic. to be given twice a-day, but in small quantities and only milk warm; her body and limbs were wrapped in warm flannels, and as I observed that nothing relieved her so much as the powders she had before taken, they were again repeated: She was better after the second powder; both the pain and diarrhoea being sensibly abated. To avoid the dan-

ger

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ger of relapse, the powders were continued once or twice a-day for upwards of a week, and with care and proper nourishment, she gradually recovered. Towards the end of the month, she took the following draught night and morning for ten days :

R.

Cort. peruv. Pulv. ʒss

Fol. Rosar. rub. sicc.

Cort. Cinth. aa ʒi

Aq. bullient. ʒx post macerat. idon. colds

R,

Hujus colat. ʒifs

Tinct. Japonic. ʒii

Consect. Alkerm. ʒi fiat haustus nocteq. mane exhibendus.

This medicine assisted her greatly, by strengthening the bowels and increasing her appetite, and at last she was restored to her former state of health ; but from taking cold, or other accidental causes, is still apt to be slightly affected with her former complaints.

The

THE late illustrious *Baron Van Swieten*, in the fifth and last volume of his *Commentaries*, a work which will render his name venerable to posterity, remarks the following circumstances, from his own experience, in what relates to the *Small-Pox*, viz. that the method of preparation usually observed, before the artificial communication of that disease, may be omitted without danger: for at the *Orphan-house*, situated in the suburbs of *Vienna*; though there was not any variation in the diet of those *inoculated*, from the rest; no inconvenience was perceived to follow. But it is to be observed, that they all breathed the open air for the whole day, and slept in spacious and lofty bed-chambers, well perfused; hence arose the opinion which now prevails with some; that those who labor under the *natural small-pox* will recover as easily as others who are *inoculated*; without much regard to diet or medicine, provided that they sufficiently enjoy the influence of *fresh air*.

According to the calculation of Dr. *Jurin*, several years ago, about one in six died by the natural small pox; but of those who were inoculated scarcely one in forty-eight. If the calculation is just, it appears that this destructive malady is rendered much milder by the method of treatment; since the number of those who die, compared to those who recover, is happily now very small; even in the natural sort, except they happen to *women with child*; or during an unhealthy season of the year, where they become complicated with other *diseases of the epidemic kind*: This favorable circumstance, seems principally owing to the same treatment in the natural small pox, as had been found so remarkably beneficial in those communicated by inoculation, in which, scarcely *one in four hundred* now die.

Abstemious, laxative diet, will be proper in the beginning; such as that of roasted apples, ripe oranges, or other cooling vegetables.

tables of the solutive kind ; also milk-pottage, or gruel sweetened with honey.

In adults and those of strong habits, bleeding is generally necessary, being so far from retarding the eruption, that it appears more kindly after that evacuation. One of the following powders will then be proper, and may be given for two or three nights successively, as occasion requires :

R.

Calomel. ppt.

Sulph. præcipitat. aa gr. x

Tart. emetic gr. ij contere & fiat pulv. subtiliss. in sex partes dividend.

As soon as the eruption appears ; if the inflammatory symptoms run high, and it seems to rush out too hastily ; the following cathartic draught should immediately be given ; especially, if the previous use of the powders has not sufficiently emptied the bowels :

C c 2 Infus.

Infus. Sen. limoniat. ʒij

Mann. calab. ʒiij solv.

Spt. Lavend. c. ʒi fiat haustus.

During the symptoms of *eruptive fever*, the patient may drink as much *cold spring water* as her thirst requires. At this time she ought, by no means, to be confined to her bed, or a warm room, but should walk gently about in the fresh, open air, taking care at her return, not to expose herself to it in a full stream, by sitting between open doors or windows; and however strange the practice might at first appear, it is now sufficiently justified and confirmed by the constant and daily success which attends it.

This method was first followed and recommended by *Sydenham*, who was often unmercifully censured for venturing to depart from the common practice; but being convinced by repeated experience of its salutary effect, and aiming at nothing so much as the public good, he submitted to undeserved

undeserved reproaches, and thought himself amply repaid by the satisfaction arising from a conscientious discharge of his duty, and the benevolent feelings of his own heart. But although the success attending the present practice, is chiefly and originally owing to the sagacious and incomparable *Sydenham*; surely, those who have since been the means of boldly opposing popular errors, and permanently establishing that method which contributes to the preservation of thousands, also deserve their proper share of praise.

By the liberal use of cold water, and the influence of *fresh air*, the sick find themselves revived in a most extraordinary manner; the frequency and fulness of the pulse is observed to abate, thirst grows less, and the symptomatic fever being almost extinguished, a free perspiration usually succeeds, accompanied with a favorable eruption; after which, nothing more seems necessary, but only to forward the maturation of the pustules, by supplying the patient

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plentifully with milk and water, tea, or any thing of the like kind. At this time, the body ought to be kept cool and temperate by emollient clysters and gentle laxatives, as the state of the bowels may require.

Where the variolous eruption is complicated with a thick *milliary rash*, it will be proper to lessen the cooling regimen, and allow the patient white-wine whey, or weak broth, instead of cold fluids.

A *phreny* happening the third or fourth day after the eruption, is an alarming symptom. *Bleeding* and emollient clysters may here be directed, and the patient should be kept cool; *leeches* may be applied to her temples, and the following julep taken occasionally; also barley water, with the addition of nitre, and vegetable acids for common drink.

R.

Aq. font. purifs. ℥ vij

Spt. nitri dulc. ℥ iij

Syr. Violar. ℥ ss fiat Julepum.

Purples

Parples on the skin denote great danger, especially if the pock is confluent; but where *bloody urine* is voided at the same time, it may be looked upon as a mortal sign. Those appearances, however, are not always the genuine symptoms of the disease, but often arise from heating regimen, and too great a degree of the circulating power. As the first may be owing to a putrid dissolution of blood, they are much more dangerous than the other, and therefore, a distinction should be made respecting their treatment. In those of the *putrid kind*, antiseptic medicines may be given; as a decoction of *bark*, with *elixir of vitriol*, or tincture of roses; but in the *inflammatory sort*, bleeding and laxatives with nitrous drinks may be directed.

Towards the height, about the eighth or ninth day, the secondary, putrid fever, which might otherwise then commence, is to be prevented by *purgatives*, if possible; therefore the same cathartic draught which

was given in the beginning, may be repeated every other day, or as the strength will permit. *Opiates* are now proper, especially after the operation of the purge, or when the patient is restless and in pain; but should a dilirium or difficulty of breathing come on, they should be wholly omitted.

Where the circulation flags, and the pustules, instead of maturing and growing fuller, seem to flatten and look pale; *snake-root*, *saffron*, and such like warm medicines, have been recommended; but as far as I have been able to observe, nothing has equalled the good effects of *James's powder*, or *emetic tartar*, given at first in such quantity as to prove gently emetic, and afterwards, to act as an alterative only.

Some direct the limbs to be blistered at this time, and others do not scruple to give *cold water*; and indeed, considering its salutary effects in the beginning, such a step does

not

not appear altogether exceptionable; particularly if it be earnestly desired by the patient.

Where the *salivation*, which usually attends the confluent small-pox, suddenly stops, the patient generally dies about the eleventh or twelfth day; especially, if her face and hands do not then begin to swell, or where some other evacuation does not immediately follow. To encourage the spitting, the head may be held over the steam of warm water, and the following *gargarism* may frequently be used:

R

Aq. hordeat. ℥j

Sal. Ammon. crud. ʒij

Mell. ʒss fiat *Gargarisma.*

Those who are seized with *small-pox* in the pregnant state, have generally much more easy and expeditious labors than other women: However extraordinary this circumstance may appear, I have seen it verified in many instances; and indeed, never yet

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yet found it otherwise in any case, where the labor was strictly natural. It cannot be owing to the general weakness and relaxation of the body, in consequence of which the child might be supposed to meet with less resistance in the birth; for if so, the *uterus* would participate of the effect, and its expulsive force being diminished, labor, instead of being sooner over, would probably be rendered more tedious and lingering.

In the *miscellan. natur. curios.* may be found several instances of women dying gravid, who were afterwards delivered of living children; *Horstius* also relates a history of this kind; and *Raymond*, in his book *de ortu infantum contra naturam*, is full of such wonderful stories; which are fitter to entertain old women and nurses, than rational men, yet the celebrated *Hoffman*, who does not seem behind hand with any of them in credulity, attempts seriously to account for such extraordinary births, by the expansion of putrid air, in the body of the fœtus.

Several

Several years ago, I was sent for to a tradesman's wife in *Mount-street, Berkley-square*, who was taken with labor just at the height of the *small-pox*; but being then at some distance, she was delivered without any assistance, before I got there, and died the next day.

July the 12th 1767, *Ann Moody* was admitted into the *Westminster Lying-In Hospital*, with symptoms of labor, and being otherwise very ill, was allowed to remain longer than usual before delivery. The *small-pox* appeared soon after admission, but as the eruption was at first taken for a rash, I was not acquainted with it until several days after: She was delivered of a dead child, about eight months old; the ninth day after the eruption, without much pain, or the usual efforts of labor: The pustules were of the confluent kind, and very thick on her skin, together with *purples*, for which a *decoction of bark* with *elixir of vitriol*

was

was given, but without effect; for she died delirious the day after delivery.

January the 14th, 1768, *Esther Grace* was admitted into the *Hospital*, and delivered the third day after, of a living child, and at her full time: Though her pains were very inconsiderable, the birth was so quick and easy as not to require any kind of assistance: The next day the *small-pox* appeared. She was carefully removed in a chair the fifth day, and died three days after, being the eighth from the time of eruption. The child was nursed and taken care of in the *Hospital*, but died at eight days old; though without any eruption on its body, or other symptoms of *small-pox*.

February the 8th, 1770, I attended Mrs. *C—n*, at *Lambeth*, who had the *small-pox* in the fifth month of pregnancy: She was young, and of a strong, healthy constitution, but very full of eruption, which was rather of the confluent than distinct kind. As I was called to her in the beginning of the disease,

disease, it was treated by the cooling regimen already mentioned; the weather being at the same time intensely cold. The *spitting*, which had assisted her greatly, began to diminish very much, a little after the height. About the twelfth or thirteenth day, she was exceeding ill; the symptoms of the secondary fever were then violent, and she was unable to speak or swallow, except with great difficulty. Nothing at this time relieved so much as a *purging draught*, which she took every other day: As her strength and spirits were always better, and the bad symptoms evidently less violent on the days she took the purge, I directed it to be made weaker, and repeated it for three days successively. She now recovered daily, and at the end of three weeks, was able to take the air; but what appeared rather extraordinary, although she had escaped abortion during the disease, she miscarried about a month after her first going abroad.

About

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About the same time, viz. *February* the 24th, 1770, I was desired to visit Mrs. *P——*, near the *Hospital*, who then labored under the small pox, in the eighth month of pregnancy. Her midwife informed me she was delivered soon after the eruption appeared, with so much precipitation, that the infant fell on the floor, as she was assisted in getting off the close-stool. I saw her the ninth day from the eruption, which was large in quantity and of the worst confluent kind: *Broad purple spots* almost every where overspread that part of her skin where the pustules were wanting; there were besides, several small vesicles on her breast filled with a yellowish fluid, like the serum of blood, and some with *bloody ichor*; but as her water came away involuntarily, I could not tell whether the urine was bloody or not. She was also delirious; Indeed, I never saw the disease attended with more malignant symptoms; and though there were no hopes of
her

her recovery, I directed the following draught, and desired that the fluids she was able to swallow might be acidulated with lemon-juice ;

- Rem also provided with the following case in:

Decoct, Cort, Peruv. ʒ iſs

Extract, ejusd. moll. Si

Elix. Vitriol. acid, gr. xxx

Tinct. Cort. Peruv. ʒ iij

*Confect. Alkerm. 3 i fiat haustus alternis
horis exhibendus.*

She died the next day about twelve o'clock, being the tenth from the first appearance of the eruption.

October the 21st, 1772, Elizabeth Lee was delivered in the Westminster Lying-in Hospital of a living child, in the eighth month of pregnancy : As the *small-pox* appeared on her skin next day, she was carefully removed to her own apartment by her friends, where she recovered ; the disease being mild, and the eruption of the distinct kind. The child was seized with it a fortnight after ;

but

but I had no opportunity to inform myself whether it lived or not.

Notwithstanding I never saw any instance where infants were born with various eruption, 'till the following case mentioned by Mr. *Wastall* occurred; yet examples may be found in the *Philosophical Transactions*, *Bartholin's Medical Epistles*, &c. where the body of the new-born infant has been found overspread with pustules; which, considering the intercourse between the mother and it, during gestation, is not to be wondered at.

Account of a Woman who had the Small-Pox during Pregnancy, and who seemed to have communicated that Disease to the Fœtus.

By John Hunter, Esq. F. R. S. from Mr. *WASTALL's* Letter on the same subject.

December 30, 1776, I was sent for to Mrs. *FORD*, a healthy woman, about twenty-two years of age, who was pregnant with her first child. She had come out of the country about three months before. Soon after her arrival in town she was seized with
the

the small pox, and had been under the care of Messieurs HAWKINS and GRANT, who have favoured me with the particulars here annexed.

I called upon her in the afternoon; she complained of violent gripings in her bowels, darting down to the *pubes*. On examining I found the *os tincæ* a little dilated, with other symptoms of approaching labour. I sent her an anodyne, spermaceti emulsion, and desired to be called, if her pains increased. I was sent for. The labour advanced very slowly; her pains were lasting and severe; she was delivered of a dead child, with some difficulty.

Observing an eruption all over the body of the child, and several of the *pustules* filled with matter, I examined them more particularly; and recollecting that Dr. LEAKE, in his Introductory Lecture to the Practice of Midwifery, had observed that it might be necessary to inquire, whether those adults

D d

have

have not been previously affected with it in the womb ; I sent a note to Dr. LEAKE, and likewise to Dr. HUNTER, in hopes of ascertaining a fact hitherto much doubted. Dr. LEAKE came the same evening, and saw the child. Dr. HUNTER came afterwards, with Mr. CRUICKSHANKS, and examined it ; also Mr. JOHN HUNTER and Mr. FALCONER ; who all concurred with me, that the eruption on the child was the small pox. Dr. HUNTER thought the eruption so like the small pox, that he could hardly doubt ; but said, that in all other cases of the same kind, he had met with, the child *in utero* escaped the contagion.

It appears, from Mr. *Grani's* Notes, that the eruption appeared on Mrs. *Ford*, in the evening of the 8th December, and that she was delivered the 31st, that is, twenty-three days after the appearance of the eruption.

A Case no less *curious* and *extraordinary*, I received from my *Pupil* Mr. *Head*, as follows:

To Dr. LEAKE.

London. Nov. 30, 1778.

SIR,

I sometime since mentioned to you a case of *Inoculation* for the small pox, which you thought singular. The history of it you have below, and may depend upon the facts, as the patient was my own.

I am, Sir,

With the greatest respect,

Your most obedient servant,

ISAAC HEAD.

In the beginning of September, 1766, I was desired to inoculate a boy of five years old, for the small pox; the parents at the same time informing me they wished it should be performed in about a fortnight.

I had often thought it possible, that the variolous matter might be capable of raising an inflammation in the arm of a person who

had passed the small pox, and that if it came to any degree of suppuration, might probably retain so much of the nature of small pox, as to infect a person who never had the disorder, by inoculating in the usual manner.

To try this experiment, I inoculated myself in the arm. I was much pleased to find an inflammation come regularly on in as short a space of time, and with as much violence, as I had ever seen in those who never passed the small pox.

On the evening of the 6th day I suddenly felt the same kind of sensation, as if a spark of fire had got on the part. On examination, I found it prodigiously inflamed; there was a vesication about the size of a small pea, and redness extended round it, under the cuticle, to the size of a sixpence. On the ninth day it was full of pus, and the circle extended to the size of a crown. On the tenth day I inoculated the child from this pustule, in the common way.

I have the pleasure to assure you, that this child had the small pox in as regular a manner, and with the usual concomitant symptoms, as any I ever had under my care. He was very sick for a day before the pustules made their appearance, and had a great many of them. I inoculated *seven other children from this patient, and none of them failed having the small pox.*

One of those was so ill, that I was very apprehensive he would have died, but fortunately he also recovered. I. HEAD.

An uncommon case is related by *Van Swieten*, as it happened under the observation of *Dr. Watson* in *London*, viz. a woman who had been for some time pregnant, and who long before had the *small-pox*, was very assiduous in attending her servant maid, who then laboured under that disease: In due time, she was happily delivered, and brought forth a healthy female child, where *evident marks of its having had the eruption, appeared on the skin.* When this child's brother was

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inoculated four years after, Dr. *Watson* had leave from the parents, to inoculate her likewise; but the operation was attended with very different effects in those different subjects; for the pustules appeared in the boy, who soon happily recovered from the disease; but the girl after drooping two days, became very well again, and remained totally free from the eruption.

A case something similar to this is also mentioned by Dr. *Mead* in treating of the small pox. He supposes that where the child is born before the perfect maturation of the pustules in the mother, it will then more probably escape the disease; and that the danger arising to women at this time, who suffer abortion, will be in proportion to the loss of blood, after the separation of the *placenta* from the uterus: But there is not sufficient reason to adopt this last opinion; for even what Dr. *Mead* himself afterwards asserts does not correspond with it, viz. that the small pox have generally been found

found most mild, when they succeed some considerable evacuation, whether natural or artificial.

Van Swieten informs us, that the celebrated *Boerhaave* attended a lady in the sixth month of pregnancy, who labored under the worst kind of *confluent small pox*: notwithstanding which, she proceeded to the full period of her time, and was then delivered of a healthy male child, which had not the least vestige or appearance of the disease.

From the above extraordinary circumstance, which was probably owing to the peculiar structure of the *placenta* and its power to absorb from the womb such juices only as were salutary and nutritious; even when the whole mass of the mother's blood was tainted with *variolous infection*; one would incline to think, that *hereditary diseases* are providentially less frequent than they otherwise would have been, and that the perfection of animal fluid depends

depends more upon the secreting organ, than the general mass from which they are strained off. This property, with which the placenta seems endowed, is beautifully illustrated, by what may be seen in *vegetables*; where two plants of different qualities both draw their nourishment from the same earth; the one a *deadly poison*, the other friendly to the human system, or perhaps an *antidote* to the former; and this is still further exemplified in grafting branches of one tree into the stem of another; for the juices of the last, will from thence be so far divested of their natural qualities, by passing thro' different strainers, as only to produce the same kind of fruit, with that of the tree, from which such branches were taken,

T H E E N D.

POSTSCRIPT.

The following Gentlemen, besides many others, who either went abroad, or settled in different parts of the kingdom, which I cannot recollect, attended my LECTURES, at the times already mentioned; most of whom took *notes*, and therefore, to such I refer for a confirmation of the facts mentioned in the *Introduction* to the preceding observations.

MR. C. M. Thode, Surgeon to the Em-
press of *Russia, Petersburgh.*

Mr. Crowder, *Leadenhall-street, London.*

Mr. John Blake, *Bristol.*

Mr. William Slater, House Apothecary to
the Dispensary, for the relief of the
Poor, *Aldersgate-street, London.*

Mr. Richard Newland, *Chichester, Sussex.*

Mr. Edward Yale, *Catharine-street, London.*

Mr.

P O S T S C R I P T.

Mr. Robert Hobson, *Bernard-Castle*, county
of *Durham*.

Mr. Charles Lightfoot, *Whitby*, *Yorkshire*.

Mr. William Cartwright, *Wenleek*, *Salop*.

Mr. Joseph Dawson, *East-Indies*.

Mr. Thomas Tubb, *Lambourn*, *Berkshire*.

Mr. Thomas Parkinson, *Kirkham*, *Lanca-*
shire.

Mr. William Harffy, *Castle-street*, *Leicester-*
fields.

Mr. William Sexton, *Thame*, *Oxfordshire*.

Mr. John Caufer, House Surgeon to St.
George's Hospital, 1771.

Mr. Robert Pope, *Staines*, *Middlesex*.

Mr. Lewis Poignand, *Duke-street*, *Westmin-*
ster.

Mr. Thomas Hammond, *Little Newport-*
street, *Newport Market*.

Mr. Jeremiah Wilkinfon, *Scarborough*.

Mr. John Marth, *Half-Moon-street*, *Piccadilly*.

Mr. J. Rackham, *Bungay*, *Suffolk*.

Mr. Thomas Inman, *St. Olyth*, *Essex*.

Mr. Edward Weeks, *Westfield*, *Suffex*.

Mr.

P O S T S C R I P T.

Mr. H. Dickinson, *Cecil-street. Strand.*

Mr. Edward Ford, *Bristol.*

Mr. James Bromley, *Rockester, Kent.*

Mr. P. Weaver, *Hermitage, Tower-Hill.*

Mr. D. Raven, *Harfield Peveral, Essex.*

Mr. Thomas Bredall, *Mattocks-street, London.*

Mr. J. Dutton, *Manchester.*

Mr. Thomas Brittain, *Rugley, Staffordshire.*

Mr. Thomas Parker, *Gloucester.*

Mr. Thomas Owen, *Rye, Sussex.*

Mr. James Scaife, *Carlisle, Cumberland.*

Mr. William Younge, *Shiffnall, Shropshire.*

Mr. James Bumpstead, *Castle Heddington,
Essex.*

Mr. William Young, *Georgia, America.*

Mr. ——— Druitt, *Winburn, Dorsetshire.*

Mr. Thomas Shute, *Bristol.*

Mr. James Travers, *Military Hospital, Gra-
nada.*

Dr. William Moore, *Brook-street.*

Mr. Thomas Vigur's, *Leostoffe, Suffolk.*

Mr. Henry Bickersteth, *Kirbylonsdale, West-
moreland.*

Mr.

P O S T S C R I P T.

Mr. Edward Horler, *Tooting, Surry.*

Mr. ——— Wilfon, jun. *Henrietta-street,
Covent Garden.*

Mr. Charles Chafmore, *Epsom, Surry.*

Mr. Robert Turner, *Enfield.*

Mr. John Manning, }

Mr. Joseph Lord, } *Boston, New-England.*

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